The Journal of the Michigan State Medical Society

PUBLISHED UNDER THE DIRECTION OF THE COUNCIL

VOL. VIII DETROIT, MICHIGAN, SEPTEMBER, 1909 No. 9

Original Articles

THE INDICATIONS FOR MAJOR GYNECOLOGICAL OPERATIONS*

RICHARD R. SMITH, M. D.,
Grand Rapids.

The subject which has been assigned me by your secretary, if dealt with in detail would compel me to far exceed the limit in time which a paper of this kind should reach. The question of indication is so intimately linked with all else in gynecology that one may hardly attempt to discuss it separately without feeling that he has left a great deal unsaid. A brief review of current opinions, however, and their tendencies, may still be useful.

I have thought it best with the time at my disposal simply to depict the attitude in which I believe we should approach these major pelvic problems and to outline the present status of professional opinion in regard to the handling of them. As in all great movements, the education of the laity has been a slow one and the general profession itself has been conservative in changing from an attitude of allowing nature to deal with these diseases practically unaided, to one of active mechanical interference. The changes have been slower on account of the early high mortality and imperfect results. However much the gynecologist may have erred in the matter of details, there is, of course, no question but that he has been, in the main, on the right track. As the work has been perfected, the vast difference between the results of operative methods and more conservative ones has been apparent and with this the indications have become clearer and less the subject of discussion.

The problems met with in major gynecology are intricate and unlike those of other fields, involving, as they do, the maintenance of the important function of childbearing, the lesser one of menstruation, the patient's social and sexual relations, an oftentimes deep-seated sentiment in regard to the preservation of her organs of generation, and lastly, the more or less important function which the ovaries play in the metabolism. In forming his judgment in regard to the best course of procedure in any given case, the gynecologist cannot well neglect any of these things and obtain the best results. They are all important, although that importance will vary largely in the individual case. But this is not all—the patient desires, and if it can be given her, she has a right to demand freedom from pain and invalidism. She wishes, above all else, to take her

*Read before the Ottawa County Medical Society, February 5, 1909.

rightful place in the care of her home and children, or to do her work and earn her living in the world at large, as the case may be. Generally speaking, I believe we, as a profession, have rather erred in laying too much stress on the preservation of the function of these organs and have not always accorded to the woman the plan of treatment which would bring her greatest happiness and contentment. An invalid, or semi-invalid mother or wife unsettles the family life, interferes with the rearing of children and leads, sometimes, to the estrangement of the husband. I do not wish to overemphasize this, nor to underestimate the importance of the matters of which I have first spoken, but I think one obtains better results if he emphasizes less her sexual functions and more the importance of maintaining properly her family and social relations.

Cancer. Of pelvic diseases, by far the most fatal is, of course, malignant disease, more commonly carcinoma. In spite of the discouraging results met with in the treatment of cancer of the cervix, the opinion of gynecologists as a whole is that hysterectomy is indicated in what we generally call beginning cases. The results have apparently been much bettered the last few years by the more radical operation. Wertheim and the many who have followed him, remove not only the uterus and appendages, but all of the parametrium and broad ligaments, all the structures about the ureters on either side, the upper third of the vagina, and sometimes the glands as they stretch upward behind the peritoneum toward the brim of the pelvis. Much the same operation is attempted from below, the perineum being first extensively divided so as to gain readier access to the pelvis. Most operators prefer the operation from above. It is a tremendously severe one, with a high mortality rate, but Wertheim reports 60 per cent of complete recoveries. Of the patients applying to his clinic he refuses about 50 per cent as being too far advanced. The operation is still *sub judice,* but is being extensively done now in this country. If cancer of the cervix has advanced too far to hope for radical cure, a thorough curettment with cauterization may occasionally be done, giving the patient some relief and oftentimes a considerable respite from the disease.

Cancer of the body of the uterus offers a far better outlook from that of the cervix; here a simple hysterectomy is often successful. It is needless to say, also, that only the earlier cases of this offer hope. I have personally known of several instances that have had no return. Kelly reports 81 per cent of cures; Boveé (quoting Hirst) one-fifth to one-third recurrences after hysterectomy for cancer of the fundus.

Cancer of the Appendages. Malignant disease of the ovary is tremendously fatal as regards recurrence; Cohn in reporting 100 cases of malignant disease of the ovaries operated in Schroeder's clinic states that but 10.5 per cent were living at the end of one year, the cure being maintained at the end of three to five years in 5 per cent. Unfortunately the diagnosis cannot often be made until the disease is fairly well advanced. It happens, not infrequently, that we remove what is apparently a benign tumor, to find under the microscope that we have been dealing with a malignant process. Personally I have operated on eight cases of malignant disease of the appendages; they have all recovered from operation, but all have had recurrences and died, with the exception of one patient living at the end of four years, but with a recurrence. One other patient lived two years after operation.

Fibroid of the Uterus. With improved technic and reduced mortality, the general opinion of gynecologists has become

more and more radical in respect to fibroids. Every fibroid causing symptoms, or of any considerable size, demands removal. This radical opinion is not shared by all men, but I believe if one considers the difficulties and dangers attending operation for advanced cases, the almost invariably perfect results, in uncomplicated ones, the danger from hemorrhage and of possible inflammatory complications and malignancy, also the effect on the nervous system of the patient (aware of her malady), it must bring one to a rather radical position in the matter. When the fibroids are small, the uterine wall slightly or not at all changed, a myomectomy will often suffice. Otherwise a supracervical amputation is advisable. Whether we shall leave one or both ovaries in removing such a uterus, is a matter still under discussion. There has been a tendency to save them in order to minimize the effect of the menopause.

Ovarian and parovarian cysts. Cysts springing from the ovary or parovarium always demand operation and the indication is, if anything, a stronger and more general one than with fibroid of the uterus. Such operations are attended by a very low death rate and by very satisfactory results in the elimination of pain and pressure symptoms, if present. They do away with the ever present danger of inflammatory complications, of injury, of twisting, or of malignancy. Cysts of large size are apt to cause serious pressure symptoms, and great distention of the abdominal muscles is apt to be followed by long continued relaxation. With simple cysts or dermoid, one should always preserve the uterus and as much of the appendages as possible. Cysts that are evidently malignant demand removal of both appendages. With papillomatous cysts one may retain the other ovary, if after careful inspection it shows itself to be free of disease.

Inflammatory Conditions. How shall we advise patients presenting themselves with the various inflammatory diseases of the appendages? Most frequent are those the result of gonorrhea. An acute salpingitis should be treated conservatively; mainly by bed rest, hot or cold applications and good nursing. Most cases, under this treatment, subside more or less rapidly, leaving the woman subject to new attacks, but oftentimes in good health for a long period of time. A certain number of those whose attacks have been short and infrequent may even retain the child-bearing function. Should an abscess form which can be readily reached from the vagina, it is best to evacuate this by a wide incision, entering the cul-de-sac back of the cervix. A radical operation can be done later with such patients, although a certain percentage never require it. Should the attack last longer than three or four weeks with little or no progress toward betterment, the woman becoming progessingly debilitated, I believe it well to intervene surgically. In advising it, however, one must constantly bear in mind that the prognosis without the operation is by no means hopeless. Time and time again I have seen cases that have run along for many weeks suddenly begin to improve and recover from the attack. On the other hand, there is always a certain danger of future debility, more extensive lesions, and finally an operation under extremely bad conditions. It may be said, also, that these women do not always recover perfect health for any length of time. It is a class in which there is always a recurrence of the trouble, sooner or later. If a woman has been subject to frequent attacks, particularly if such attacks have been prolonged, operation is, I believe, almost invariably indicated. If the woman is young and the lesion comparatively simple, one may content himself with removing one or both tubes, as the

case may be, leaving one or both ovaries, if they are healthy; with older women, or with a more extensive process, the complete hysterectomy, or at least one that removes all of the mucous membrane of the cervix, is indicated. The results of so-called conservative methods, by which is meant the conservation of the uterus and part of the appendages, have been sometimes fairly satisfactory, but not always so. Many of these patients are unrelieved of the pain, although they are freed of the attacks, if the tubes are removed. Many of them have a persistent discharge and some return later or go to other surgeons for a radical operation. I am safe in saying that radical operation for gonorrheal invasion of the uterus and appendages is the rule of the majority of gynecologists of experience, today, and under this treatment has become satisfactory. The complete relief that such patients obtain far more than offsets any sentimental reasons, the preservation of menstruation and the avoiding of the menopause, which have been the strongest arguments on the other side. It might be added that a hysterectomy during the quiescent period gives no higher mortality, in experienced hands, than the less radical operation.The general profession has still to learn that hysterectomy, *per se,* is not an especially dangerous operation. Operations in the pelvis, which are followed by a high mortality, depend more on the lesion to be dealt with than with the particular organ to be removed.

Tuberculosis. If the general peritoneum is involved, the appendages being simply part of the involvement, and there is no pus present in the pelvis, it is well not to touch the appendages, but simply to evacuate the abdomen in the usual way of any ascites that may be present, and to close the abdomen. If, on the other hand, the appendages are extremely involved, and the peritoneum but slightly, they, and perhaps the uterus, should be removed. A considerable percentage of such cases make good recoveries.

Puerperal Infection. The so-called puerperal infections, those that are not gonorrheal, following labor or abortion are, as a rule, best treated conservatively. When pus forms, it must, of course, be evacuated and this can be done from below. The prognosis is peculiarly favorable, although such cases may be slow in recovering. If uncomplicated by gonorrhea they do not tend to recur.

Displacement of the Uterus. We turn now to another class of cases. The question as to whether a retrodisplacement of the uterus should be corrected by operative measures or not, has been under discussion for years. I believe that the opinion that I am to give reflects neither that of the extremist in his advice as to operation, nor that of him who looks upon retroversion as of no pathological significance whatsoever. In spite of the fact that a woman oftentimes goes for many years with a retroverted uterus without discomfort, the fact remains that when a woman presents herself complaining of certain symptoms which we commonly ascribe to her displacement, that its correction is followed by relief. If a uterus is small, has never been pregnant, is causing no pain (and such a uterus should not) I do not believe it necessary to correct the position unless other operative work is necessary at the same time, in which case an Alexander, or if the operation is an abdominal one, any operation which shortens the round ligaments, may be done. If, on the other hand, the uterus is enlarged and the symptoms definite, the correction of the displacement, even though unaccompanied by other operation, may be wisely performed. A patient who requires extensive plastic work and who does not at the same time have the position of

the uterus corrected, is apt to be but half cured. Operation is to be preferred to the long-continued wearing of pessaries.

Prolapse. Practically every case of prolapse of the uterus is best corrected by operations and this operation should be planned according to the conditions to be met with. In a woman who has never borne children, a removal or shortening of the hypertrophied cervix and a shortening of the round ligaments may suffice. In younger women, also, who have borne children, the uterus should be preserved. An extensive plastic operation, combined with a shortening of the round ligaments, usually suffices. Most operators have given up entirely the operation called the ventro suspension or fixation. Vaginal fixation combined with plastic work has given excellent results when it seems desirable to retain the uterus. Toward the menopause and following it, there being no reason for the preservation of the uterus, better results are obtained, I believe, if it is completely removed. This should be combined with any plastic work that may be necessary.

Subinvlution. A considerable number of women presenting themselves to the gynecologist have a large, so-called subinvoluted uterus. In the early years following this trouble, a curettage and the correction of other conditions present may be followed by a diminution in the size of the uterus and satisfactory results. As the years go on, however, the uterus loses the power of regaining its natural size, and curettage will have no effect. Such women may suffer greatly. It has been the generally followed rule in the past to do conservative work on patients of this class and they, as a rule, have been illy relieved of their trouble. A large number of operators today are removing such uteri from women nearing the menopause and the results have been far better. In fact, few of the things in gynecology are more satisfactory than hysterectomy in just this class of cases. The objection to this operation is the bringing on of the menopause, but the woman is freed from pain, and if told of the nature of the symptoms, she does not, as a rule, suffer greatly nor long from them.

Extrauteine pregnancy. All cases of extrauterine are operative. This should be done at the earliest possible moment, except in certain cases of profound collapse from haemorrhage, in which case it is, as a rule, safer to wait for the recovery from such shock, which may be fairly expected, than to assume the risk of immediate operation in such a condition. This must be a matter of judgment in each individual case.

Neurasthenia. What is indicated in the patients presenting themselves with a well-marked neurasthenia? We may divide them into several classes. The patient with a neoplasm, infection, or other well-marked pathological condition should be dealt with much as any other patient. It may even be said that the indications are peculiarly urgent in such a case. There is also the patient with symptoms which have been referred to her pelvis, in which nothing wrong can be felt by examination; as far as operation goes, she should be left religiously alone. The most difficult of which to judge is the patient with the slight abnormalities—let us say a marked retroversion of the uterus, or a moderate subinvolution, or with markedly prolapsed and tender appendages. Some of the patients do best if these lesions are attended to, but it must always be understood that this constitutes but part of the treatment and that the neurasthenia will demand appropriate treatment afterward. With many such patients it is best to defer operation indefinitely and treat the other condition.

What I have said in regard to neurasthenia applies also to the simple disturbances of nutrition so often, but not always associated with it. There is no simple rule that will guide us in our judgment in this class. They constitute, as a rule, a most unsatisfactory lot as far as operation goes.

Boveé, J. Wesley—*The Practice of Gynecology.* 1906, p. 436.
Cohn, C.—*Z. f. Geb. u. Gyn.* 1886, Vol. 12, p. 14.
Kelly, H. A.—*Operative Gynecology.* 1906, p. 488.
Wertheim, E.—*Surgery, Gynecology & Obstetrics.* 1907. Vol. 4, p. 1.

TECHNIC FOR THE INTRA-MUSCULAR INJECTION OF MERCURY IN THE TREATMENT OF SYPHILIS

HENRY ROCKWELL VARNEY, M. D.,
Detroit.

The hypodermic method of administering mercury intra-muscularly is gaining favor over some of the older methods, in selected cases. Not to the extent of excluding the administration of mercury by the mouth or by inunction has this method grown, but from its specific advantages.

The administration of mercury by the mouth, while the most pleasant and convenient, is far from accurate. It matters not what salt of the drug is prescribed or the doses, the patient, intentionally or unintentionally, neglects to take the drug at the proper time, and no one can estimate how much of it is absorbed, even though it be administered in accurate doses.

So, also, with the inunction method; while the dose to be rubbed in is estimated and the time and mode of preparing the skin have been carefully outlined for the patient, unless the physician who prescribes the inunction will prepare the skin of the patient and administer the first inunction, thereby instructing the patient in each step of the method, he will only vaguely know what time is required in rubbing the dose prescribed in this particular skin, or how much time should be spent in rubbing or pounding in the medication.

It is a fact, and a very important fact, that the epithelial layer of the skin of our patients varies greatly, not only in thickness, but also in the manner in which the epithelial cells are shingled on and cemented together, Nature's means of preventing penetration. This explains, in part, why some skins are exceedingly adapted to the inunction method while with others it is almost impossible, with any amount of friction or pounding, to cause penetration of the average dose of mercury.

Any and all of the methods recommended for the administration of mercury present some objections. Some of the few objections mentioned are overcome by the intra-muscular injection, in that this method not only insures the most exact doses, but the absorption of the drug is also accomplished in a definite manner. Prompt control of the disease can be gained by this method with less likelihood of causing the disagreeable symptoms of mercurialization, which, when they occur, are of great importance pertaining to the patient's general resistance against the disease. In a certain percentage of syphilitics, it is the method of election.

The chief objection to intra-muscular injection is the painful indurated nodes

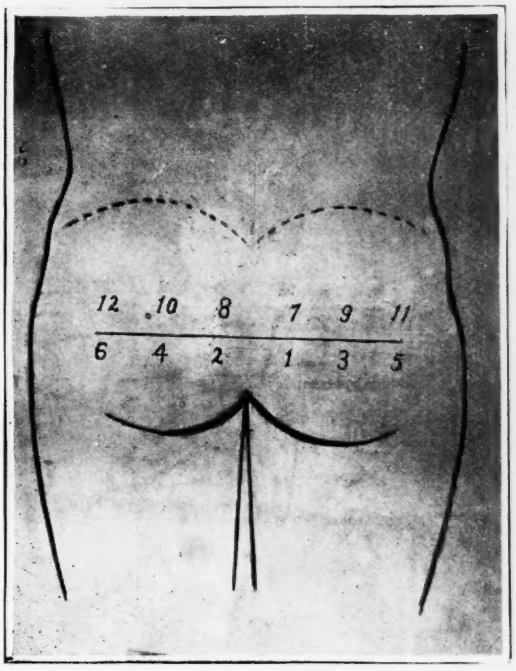
which not infrequently result in abscess or gangrene and emboli.

With several years of personal experience, and with the knowledge of the extensive experience of other syphilographers with the intra-muscular injections of mercury, I am quite convinced that the objections to this form of administration occur largely, if not wholly, from faulty technic. It is, therefore, the purport of this paper to outline what has been a successful technic.

It is of the utmost importance that the first hypodermic injection be successful, not only from the physician's standpoint, but in the mind of the patient also, for if success does not attend the first injection, the patient will likely seek treatment elsewhere, or will not allow a continuation of the injection method.

The region of selection is the gluteal. The depth of the muscle, the mild sensitiveness and the fact that this area cannot be seen by the patient and will admit of great pressure from the injection with less risk of circulatory interference, are some of the reasons why preference should be given to this area. In giving a series of injections every second day or third day, or even once a week, one must outline the location of each injection in each individual case. The varying size of the gluteal region and the depth should be carefully noted. By so doing one may prevent the most common accident that of injecting with too long or too short a needle or too near an area that has been recently injected, in which area the induration of the last injection still exists.

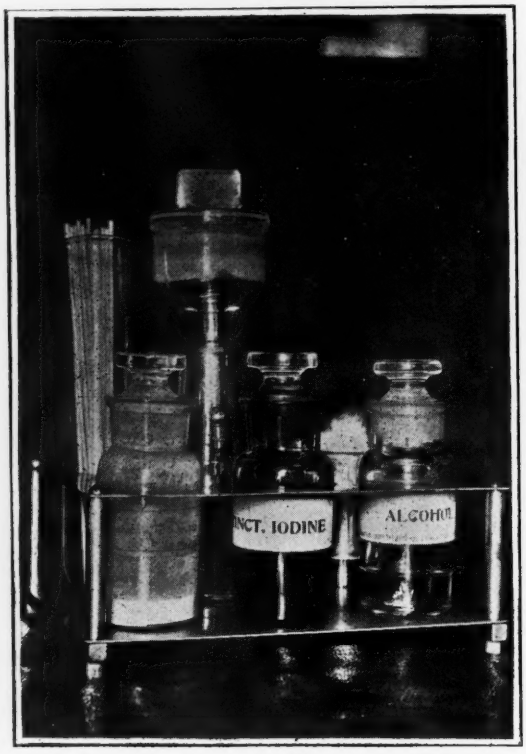
The chart outlining the areas may be of assistance. The line is drawn across the buttocks from the most prominent part of the great trochanter, and the injections given above and below this line, alternating the buttocks, beginning with the area marked No. 1, and so on until a dozen injections are well cared for in the average sized buttocks. The areas of injection should be two inches apart, each way, varying this chart as the general area indicates. In the female the area is so much larger than in the male that the injections can be more widely spaced than two inches. A record card of the areas injected, the size of the dose and the date upon which it was given should be carefully kept, for



one cannot always be guided by the puncture of the last injection, if the injections are given many days apart, and, furthermore, one cannot trust his or the patient's memory in regard to the area of the last injection.

Much study and research have been carried on in disinfecting the skin, and it is still an unsettled question just how much is accomplished by the recommended means for rendering the skin less septic. The method employed is that of applying pure alcohol to the area

to be injected, with friction, then paint an area the size of a quarter of a dollar with tincture of iodine, give the injection, or make the puncture, through the area stained by the iodine. Tincture of green soap may be used before the alcohol, yet I do not deem it of much assistance. The penetrating power of the tincture of iodine into the epithelial layer and its mild antiseptic properties are of more value than anything thus

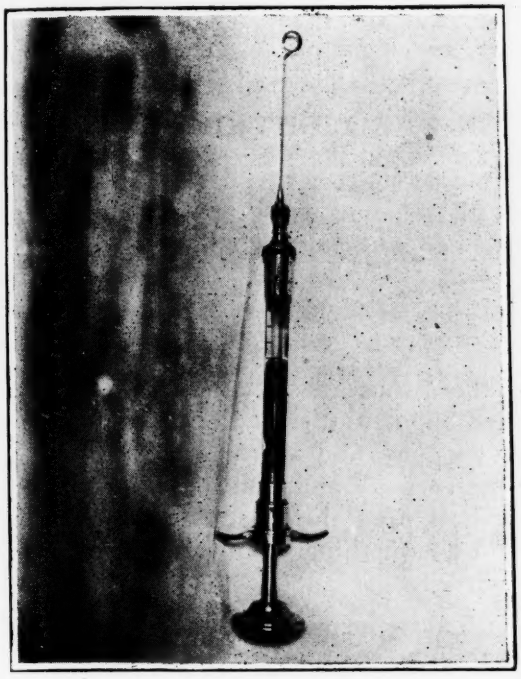


far recommended. This technic has been most extensively employed in the use of bacterial suspension in the past three years.

In the photograph are shown the articles which are needed for ready use in the administration of mercury by this method, viz:—a cotton container and wooden applicators which are used for applying the alcohol and the tincture of iodine. The most important article in the set is the specially constructed ground glass stopper bottle in which the needle and a portion of the syringe are suspended in a 1:20 carbolic solution. The sixth article is the bottle containing a solution of mercury. I am employing a 10 per cent. solution of salicylate of mercury, a suspension in liquid albolene as an insoluble salt, and the iodide of mercury as a soluble salt. In all of my intra-muscular injections, whether it be soluble or insoluble salt, I am administering 1, 2 and 4 per cent. of chloretone, to control the burning sensation directly following the injection. This suspension is sterilized and kept in a ground-glass stoppered bottle. It is important that this bottle be round, so that the suspension can be readily shaken into an even emulsion before it is drawn into the syringe. This tray is compact and can easily be conveyed about without fear of breakage or of contaminating the articles which are necessary for the successful administration of mercury. The syringe to be used can be the ordinary instrument with a graduated piston. The objection to this syringe is that one cannot see the contents of the barrel as with the glass barrel, and it is sure to corrode in a very short time, from the mercury, which will render it useless.

The Gottheil syringe shown in the cut is much to be preferred over the ordinary hypodermic syringe. Its advantages are that of a graduated glass barrel, equipped with a large area on the end of the piston for the thumb pressure, as well as larger braces for the fingers, the advantages of which are readily recognized. The needles are fitted on rather than threaded, so that disconnection of the needle after insertion is more readily and quickly accomplished than if the needle had to be unscrewed. The needles employed must be of at least three lengths in order to success-

fully place the injection into the muscles of every case. The amount of fat differs greatly in different patients, and one can readily see the importance of the varying lengths of the needle in order to place the injected material in the proper tissue. One can readily determine the depth or thickness of the fat by pinching the tissue between the fingers and then estimate as to the length of the needle to be employed in this case. The length of the needle should be 1¾ in., 2 in. and 2½ in., and of large enough calibre to readily pull through it the insoluble salt if it is to be employed. The needle must at all times be sharp, for it is the dull needle that causes pain and discomfort to the patient. Needles, frequently used, as well as those used less frequently, will become dull, most often from striking the point of the needle, or from corrosion. With a dead flat, fine file, one can quickly sharpen such a needle, perhaps sharper than it was originally, and with a sharp needle it is often impossible for the patient to tell when it penetrates the skin. With oil suspensions of the mercury, the needle is well lubricated, which assists also an easy entrance.



Some little minor points in the operation itself should be kept in mind other than those mentioned. The patient should lie upon the left side, with the gluteal muscles well relaxed. Hold the syringe firmly in the right hand and with the left hand put the skin of the area to be punctured on the stretch. With a quick thrust put the needle through the skin, by so doing, the sensory nerve is passed with but little sensation. Once through the skin, there is practically no sensation produced by the needle. The needle can be inserted into the deeper structures more slowly, and if it be slightly slanted, so as to go under the muscle fibres rather than directly through the fibres, they will act as a valve, preventing the injected fluids from following the needle when it is withdrawn. When the depth to which the injection is to be given is reached, the needle is disconnected to ascertain whether a blood vessel has been entered. If this occurs, it is best to withdraw the needle and select a new area. I still feel that one is less likely to get an embolus by so doing than by injecting when blood is well up into the needle, presenting enough force to empty the syringe of the solution with which it is filled. The injected solution should be warm and injected slowly, and before withdrawing the needle, the tissues should be grasped about the needle and held firmly, so as to prevent any mercury following the needle out into the skin.

A change of position of the patient, so as to slightly put the muscles on the stretch, will also assist in preventing mercury from following the needle as it

is withdrawn. When mercury follows the needle into the skin or connective tissue, a very sensitive area is the result, lasting several days, as well as an indurated nodule, which is but slowly carried away. Directly the needle is withdrawn, give the area injected a quick, rotary massage with a cotton pledget of alcohol. This massage assists in disseminating the injected fluid, before it has caused much coagulation of albumen. It is well to instruct the patient to keep all prolonged pressures from the area injected for the first twenty-four hours, thus preventing pressure anemia, which is another precaution against necrosis of the injected area.

Careful attention to these details is productive of success in this method of treatment, which is the method par excellence in many of the severe types of syphilis.

WILLIAM BEAUMONT AND HIS WORK IN THE LIGHT OF MODERN RESEARCH*

BURTON R. CORBUS, B.S., M.D.,
Grand Rapids.

It is with no small degree of hesitancy that I present to you tonight, one whose story has been told, whose character has been delineated, whose life work has been extolled by many men far abler than I, possessing far more facile pens, and much larger opportunities. My temerity is due in part to the personal interest which I feel in one who is truly the father of that branch of medicine in which I am especially interested; but more to the belief that the Grand Rapids Academy of Medicine has neglected a field prolific in incentive factors. It is well for us to have frequently brought before us the lives and personalities of those men who, with hign aims and large ambitions, have, as Doctor Osler so aptly puts it, "attained that honor which can only come when the man and the opportunity meet—and match."

We need to become better acquainted with such men, to know of their sacrifices, their deprivations, their failures and their successes attained in spite of limited opportunities and few advantages, that we may find therein, the incentive for better work and that ambition which shall lead even the least of us to desire to add a something to the sum of human knowledge.

With this purpose in view, I feel that I could choose no better subject than this man, who, in our own state, found and matched his opportunity.

Michigan has frequently presented to the scientific world through her trained scientists, her indefatigable workers, advances and discoveries in medicine and its branches of truly incalculable value, but no one man has added such a sum total to knowledge, with an exactness which eighty years of patient, persistent observations have, in the main, but served to verify, as has this man whom the profession of Michigan delight to honor.

I present to you, William S. Beaumont, one-time post surgeon of Fort Mackinac, Michigan Territory, the father

*Read before the Grand Rapids Academy of Medicine, April 7, 1909.

of American physiologists, the value of whose work is as unquestioned today as when, in 1833, appeared this appreciation in the American Journal of the Medical Sciences:

"The report of his (Dr. Beaumont's) experiments and observations constitutes unquestionably in many particulars, the most important work ever published on the physiology of digestion."

William Beaumont was born at Lebanon, Connecticut, in 1875. His education was certainly limited. About all that is known is that he was considered capable of teaching school, a profession which he followed for a year or two, during which time he began the study of medicine. "There is no evidence, so far as I can find," says Vaughan, "that he ever attended a medical college." It would seem that the extent of his medical training was limited to about two years in the office of a Doctor Chandler. Entering the United States Army as assistant surgeon, he saw a not inconsiderable amount of service in the ten years immediately preceding the beginning of that work on which his fame rests. As indicative of this I quote from his journal of April 27, 1813.

The British on evacuating the garrison had caused their magazine to be exploded, injuring three hundred and killing sixty. He says in part:

"A most distressing scene ensues in the hospital. Nothing is heard but the agonizing groans and supplications of the wounded and dying. The surgeons wade in blood cutting off arms and legs and trepanning heads.....My deepest sympathies were aroused—I cut and slashed for thirty-six hours without food or sleep."

Again on April 29:

"Dressed upwards of fifty patients—from simple contusions to the worst of compound fractures—more than half the latter. Performed two cases of amputation and one of trepanning. At twelve P. M. retired to rest my fatigued body and mind."

In 1832, while stationed at Michillimackinac, now Mackinac Island, came the opportunity with which you are all familiar, and for which, unknowingly, he had been preparing himself, for I cannot believe that he had not been interested in physiological work prior to this time. We know that at the time of his experimental work he was thoroughly familiar with the literature of the day bearing on the subject, and it would seem that a certain familiarity with the literature and a certain fondness for the subject, must have been present to act as an incentive for the undertaking of these investigations. Other men had had like opportunities and failed to grasp them. Alexis St. Martin was not the first case of permanent gastric fistula; Barrows, of the Royal Irish Academy, relates such a case; Louis refers to cases which occurred to Foubert and Covillard; Helm, of Vienna, reports another case, and one occurred at the La Charite in Paris. Not one of these cases occurring in what were then the centers for scientific medical study and research, were utilized in any beneficial manner.

On June 6, 1822, Alexis St. Martin was accidently wounded by the discharge of a musket. According to Beaumont:

"The charge consisting of powder and duck shot was received in the left side of the youth, he being at a distance of not more than one yard from the muzzle of the gun. The contents entered posteriorly, and in an oblique direction, forward and inward, literally blowing off integuments and muscles of the size of a man's hand, fracturing and carrying away the anterior half of the sixth rib, fracturing the fifth, lacerating the lower portion of the left lobe of the lungs, the diaphragm, and perforating the stomach.

The whole mass of materials forced from the musket, together with fragments of clothing and pieces of fractured ribs, were driven into the muscles and cavity of the chest.

I saw him in twenty-five or thirty minutes after the accident occurred, and, on examination, found a portion of the lung, as large as a turkey's egg, protruding through the external wound, lac-

erated and burnt; and immediately below this, another protrusion, which on further examination, proved to be a portion of the stomach, lacerated through all its coats, and pouring out the food he had taken for his breakfast, through an orifice large enough to admit the forefinger."[1]

The wound was carefully treated according to the methods then in vogue, apparently consisting largely of carbonated fermentative poultices. In the course of healing, sloughing of the injured portions of the lung occurred, and in the months succeeding, there came away at various times portions of the costal cartilages. In the final healing there was left,

"A small fold or doubling of the coats of the stomach, forming at the superior margin of the orifice, slightly protruding and increasing until it filled the aperture so as to supersede the necessity for the compress and bandage for retaining the contents of the stomach. This valvular formation adapted itself to the accidental orifice, so as completely to prevent the efflux of the gastric contents when the stomach was full, but was easily depressed with the forefinger."

It was through this window that the observations were made.

The experiments commenced in 1825, and were continued with interruptions until 1833. Evidently St. Martin, grateful to the man who had unquestionably saved his life, who had taken him into his family and cared for and treated him when the authorities would have sent him back to Canada as a common pauper, aided the Doctor in his investigations and willingly submitted to the pain and unpleasantness incident thereto. Later, however, his appreciation and gratitude became less intense. At one time, he took French-leave of his benefactor, and it was only with much solicitation and pecuniary sacrifice on the doctor's part that he prevailed upon him to return for the later experiments. Thereafter, to the great disappointment of Beaumont, no persuasion was successful in inducing him to return, though many and frequent were the attempts that were made.

In a letter to his cousin, written some years afterward, Beaumont says, in regard to the "old fistulous Alexis":

"I must have him at all hazards, and obtain the necessary assistance to my individual and private efforts, or transfer him to some competent and scientific institution for a thorough investigation and report. I must retrieve my past ignorance, imbecility and professional remissness of a quarter of a century or more by double diligence, intense study and untiring application of soul and body to the subject before I die."

Before discussing the experiments and observations, I want to quote a paragraph contained in the preface of the first edition of his "Gastric Juice and Physiology of Digestion":

"I had opportunities for the examination of the interior of the stomach and of its secretions, which has never before been so fully offered to any one. . This most important organ, its secretions and its operations, have been submitted to my observation in a very extraordinary manner, in a state of perfect health, and for years in succession, I have availed myself of the opportunity afforded by a concurrence of circumstances which probably can never again occur, with a zeal and perseverance proceeding from motives of which my conscience approves.....

I submit a body of facts which cannot be invalidated. My opinions may be doubted, denied, or approved, according as they conflict or agree with the opinions of each individual who may read them, but their worth will be be best determined by the foundation on which they rest—the incontrovertible facts."

And again, later in his work:

"Truth like beauty is when 'unadorned adorned the most,' and in prosecuting these experiments and inquiries, I believe I have been guided by its light."

It is not surprising that observations undertaken with such a spirit should produce a work justly considered a

[1]Cited by Vaughan, "Beaumont and His Work." *Physician & Surgeon, Del.*, 1902.

classic. With such ideals, it is not strange that for the most part his contemporaries were impressed by the accuracy and truthfulness of his observations and were not slow in accepting his book, and willing to give him his due credit.

Doctor Combe, probably the leading English physiologist of his day, says in his work on the Physiology of Digestion":

> Doctor Beaumont ..... pursued his inquiries with a zeal, perseverance and disinterestedness highly creditable to his character both as a man and as a philosopher,"..... and again: "From the excellent judgment with which he carried on his investigations, and the scrupulous care with which he announces his results and separates facts from theory, it is impossible not to place great confidence both in his personal qualifications as an observer and in the general accuracy of his statements."

In the last few years Pawlow and Chigin, Cannon and Starling have, as the result of most laborious experiments and observations on animals, made most valuable contributions to the physiology of digestion, and as we read their experiments and their observations, more and more, are we impressed with the fact that Beaumont in his observations and his interpretations, did but anticipate in the largest measure, these findings. Fully appreciating that errors in his interpretations have been determined, that marked advancement along individual lines have been made, yet, the largest amount of work and the greatest number of experiments have resulted in simply a confirmation of findings made by an untrained scientist in the Michigan woods.

I desire to take up a few of these conclusions of Beaumont, comparing them with the advanced knowledge of today. One must not forget in analyzing these experiments, that the knowledge of the physiology of digestion at this time was in a most chaotic state. Physiologists had barely gotten beyond the theories of putrefaction, trituration, maceration and fermentation, although the more advanced physiologists of the day, were "in favor of the existence of pretty active chemical agents in the gastric fluids," and Prout, 1824, Tiedemann and Gmelin were insisting that this chemical agent was hydrochloric acid.

1st. The Movement of the Stomach.

Cannon's studies along this line have been most exhaustive, and should be truly classed among the most valuable contributions of recent years. In his experiments on animals, he relied on the use of X-ray, following the feeding of a bismuth meal. [1]Within five minutes after a meal of bread, a slight annular constriction appears near the duodenal end of the antrum and moves peristaltically towards the pylorus. This is followed by several other waves of similar character. Two or three minutes after the first movement is seen, very slight constrictions appear near the middle of the stomach (the preantral part) and becoming deeper move slowly toward the pylorus. As digestion goes on, the antrum becomes somewhat elongated and the constrictions somewhat deeper, but never until the stomach is nearly empty do they divide the cavity entirely.

Every constriction wave does not force food through the pylorus, for the majority of waves, it might almost be said the pylorus remains closed. Under these circumstances the food is forced into the blind extremity of the antrum. When this occurs a part at least of the food which is being pressed upon, is forced backward through the constriction toward the cardiac end of the stomach.

Now listen to Beaumont:

> "All these facts (referring to his experimental observations, taken together, will, I think, rationally admit of the following explanation. The longitudinal muscles of the whole stomach, with the assistance of the transverse ones of the

[1]From *Physiology of Alimentation*, Martin Fischer.

splenic and central portions carry the contents into the pyloric extremity. The circular or transverse muscles contract progressively, from left to right. When the impulse arrives at the transverse band, which is described as situated near the commencement of the more conical shaped part of the pyloric extremity, three or four inches from the small end, it is excited to a more forcible contraction, and, closing upon the alimentary matter and fluids, contained in the pyloric end, prevents their regurgitation. The muscles of the pyloric end, now contracting upon the contents detained there, separate and expel some portion of the chyme. It appears that the crude food excited the contractile power of the pylorus, so as to prevent its passage into the duodenum, while the thinner, chymified portion is pressed through the valve, into the intestine. After the contractile impulse is carried to the pyloric extremity, the circular band, and all the transverse muscles, become relaxed, and a contraction, commences in a reversed direction, from right to left, and carries the contents again to the splenic extremity, to undergo similar revolutions.

It would appear, then, that the discharge of the chyme, from the stomach, is effected by mechanical impulse. But, I confess, I do not like to give an opinion. The idea of mechanical force, I admit, is liable to objection; but, perhaps, not more so than that of the selecting power of the pylorus. Whatever bias I may have in favor of the former method, has been forced upon me by the deductions of experiment and observation."

It is exceedingly interesting to note in his conclusions here, as in all his observations, the evidence of that truly wonderful philosophical mind which sees beyond the confines of his immediate observations, yet refrains from assigning causes which are at this time unprovable. We now know, as you are all aware, that there are two factors concerned in the opening and closing of the pylorus. The pylorus opens whenever free hydrochloric acid of sufficient concentration is present in the stomach. The opening of the pylorus allows the escape of a part of the acid stomach contents into the duodenum. As soon as the acid comes in contact with this portion of the intestinal tract, however, the pylorus is made to close and remains closed until the acid in the duodenum is neutralized through the flow of the pancreatic juice and bile into this portion of the gut. As the acid in the duodenum becomes neutralized, the stimulus to the closure of the pylorus is weakened until the acid in the stomach once more opens the sphincter. Another portion of food in consequence escapes from the stomach, the pylorus closes once more, and the cycle is repeated.

2nd. The Gastric Juice.

The observations of Pawlow and his co-workers comprise the most brilliant contributions in gastric digestion in recent years. These observations you will remember were made on dogs by means of an artificial pouch, the opening of which is attached to the abdominal wall, while the base is still connected with the main cavity of the stomach, but separated therefrom by a partition of mucous membrane. This miniature stomach gives a true picture of the secretory activity of the large one without interference by the admixture of food.

Further observation, you will also remember, were made by the method of "sham feeding." This consists in feeding a dog in which the oesophagus has been separated in such a way that the food never enters the stomach.

Some of Pawlow's conclusions are:

A. That the secretions of gastric juice is dependent upon the taking of the food. The stomach of the fasting animal is entirely empty.

I read you Beaumont's experiments along this line:

"No. 18. March 8. At 8 o'clock A. M.—Stomach empty—extracted one and a half ounce of gastric juice.

No. 19. March 12. At 9 o'clock A. M.—Stomach empty—extracted one and a half ounces of gastric juice.

Jan. 26. Experiment No. 73. At 9 o'clock,

he breakfasted on sausage, bread and coffee. 10 o'clock. Th. :34. Temperature of the stomach, 100¾, and full of a heterogenous fluid. 12 o'clock, N., returned from a walk. Stomach empty—temperature, 101 and a fraction. Weather clear and pleasant. Th.: 39. Wind N.W. and moderate."

Listen to his conclusions:

"It would seem from the preceding experiments that the stomach contained *no gastric juice* in a free state, when aliment is not present. Any digestible or irritating substance when applied to the internal coat excites the action of the gastric vessels. Hence I infer that the fluid in these experiments was incited to discharge itself by the irritation of the tube used in extracting it. And again:

"From this and other experiments, it may be clearly inferred, that in the most natural and healthy states of the stomach, there are little or no fluids, of any kind, in the gastric cavity, until excited by aliment or other irritants; and that digestion under this condition, is the most rapidly and perfectly performed."

You note that there is a slight degree of error in Beaumont's observation according to Pawlow's experiments. Today we recognize that no mechanical stimulant is effective in bringing about a secretion of gastric juice, even in the slight degree found by Beaumont and that he obtained any acid secretion at all is probably due to errors in his experiment. Like errors in animal experiments being explained "by not waiting until stimulation from the previous meal had ceased—by psychic secretion from exciting the dog by the smell of food on hands," etc.

B. (Pawlow's observation.) That the gastric secretion is not all poured out at once upon the food, but continues as long as the food remains in the stomach.

On account of length, I cannot quote experiment No. 31, but here are Beaumont's conclusion.

"This I think is an evidence that the fluid is discharged into the stomach gradually and progressively according to the requirements of the aliment."

C. That emotional depressions influence the secretions. I read you experiment No. 32:

"March 12. At 8 o'clock A. M., extracted one ounce of gastric juice.

At 9 o'clock, he breakfasted on fat pork, bread and potatoes. One hour afterwards, examined contents of stomach—found a heterogenous mixture, resembling thick porridge.

At 1 o'clock P. M.—four hours after having eaten—took out a portion, in a complete chymous state, without any entire particles of food to be seen. It was of a milky, or rather thin, gruel-like consistency, and considerably tinged with yellow bile; a circumstance which I had but once before observed in my experiments upon him. And this I supposed to have been the effect of violent anger, which occurred about the time of taking out this parcel.

Beaumont says, "This experiment shows the effect of violent passion on the digestive apparatus. The presence of bile, in this instance, was believed to be the effect of anger. In a healthy state of the stomach, and an equable frame of mind, this substance has seldom been found in the stomach. When so found, except under peculiar circumstances of diet, it may generally be regarded as an indication of either mental or corporeal disease; and may be considered a foreign and offending substance in that organ."

It was not given to Beaumont to go farther in a determination of the connection between the central nervous system and the stomach, and it remained for Pawlow and his co-workers to determine through the device of "sham feeding" that the vagus nerve markedly influences the secretion of the gastric juice. The excitant of the vagus being purely psychical—in other words the appetite. The gastric juice so secreted Pawlow calls the "appetite juice," and he proves that the more eagerly a dog eats, the greater the amount of juice, and the higher the digestive power.

Food introduced into the stomach directly, will, of course, stimulate the secretion of digestive juices—but the

process will be delayed and the flow will be poorer both in quantity and quality.

The limited chemical knowledge of the day did not permit of the determination of the ferments of the gastric juice and the discovery of pepsin was left to Schwann at a somewhat later date, but here again is shown the wonderful foresight of Beaumont, and he concludes, "That it (gastric juice) contains free muriatic acid and *some other active chemical principles.*"

One is tempted to continue these comparisons far beyond the legitimate confines of such a paper as this—with ever increasing respect for the man who could, through two hundred and thirty-eight experiments and observations show such devotion to science, such consistent desire for truth and accuracy.

At the end of his book Beaumont adds some pages of "Inferences"—many of which have become the truisms of today. In concluding I cannot refrain from quoting a few of these:

That the quantity of food generally taken, is more than the wants of the system require; and that such excess, if persevered in, generally produces, not only functional aberration, but disease of the coats of the stomach.

That bulk, as well as nutriment, is necessary to the articles of diet.

That oily food is difficult of digestion, though it contains a large proportion of the nutrient principles.

That the time required for the digestion of food is various, depending upon the quantity and the quality of the food, state of the stomach, etc., but that the time ordinarily required for the disposal of a moderate meal of the fibrous parts of meat, with bread, etc., is from three to three and a half hours.

That solid food, of a certain texture, is easier of digestion, than fluid.

That stimulating condiments are injurious to of the coats of the stomach.

That the use of ardent spirits always produces disease of the stomach, if persevered in.

The First Theromcmeter.

According to the Abbé Nollett, the first thermometer was invented by a peasant named Drebbel, of North Holland. Drebbel's thermometer was composed of a vertical glass tube, ending at the top in a bulb, while the lower end was plunged in a vessel filled with water, or some colored fluid. When the bulb warmed the expanded air within drove back the water. When the air cooled again the external pressure caused the liquid to rise again in the tube. The members of the accademia del Cimento soon substituted for this hardly practical apparatus the more convenient instrument we still use.—*Health.*

Avoid touching the cornea during the administration of an anesthetic. The ocular reflex can be obtained just as well through the lids, and the pupils and motions of the globe offer the most definite indications of the degree of narcosis.—*Am. Jour. Surg.*

The diagnosis of tuberculosis and cancer will make better progress when family history is utterly ignored.—*American Journal of Surgery.*

When gas comes from an abscess which has been opened in some part of the abdomen, it must not be hastily assumed that the bowel is involved, as many of the abdominal suppurations are associated with gas-forming bacteria. This is notably the case with subphrenic abscesses.—*American Journal of Surgery.*

Patients who show a progressive loss of vocal power should be examined most carefully for an intralaryngeal condition. An acute aphonia may be due to an inflammatory condition or paresis of one cord; alcoholism, syphilis, tuberculosis and malignant disease bring on a chronic condition. Two most important causes of chronic laryngitis are thickening due to an old inflammatory process and the presence of a small, hard, nodular tumor on one of the cords, e. g., fibroma.—*American Journal of Surgery.*

THE SPECIALIST AND THE GENERAL PRACTITIONER*

FRANK B. TIBBALS, M.D.,
Detroit.

As a physician of nearly twenty years' standing, I have noted with interest the gradual trend toward specialism on the part of both the profession and the laity, particularly in urban communities. The genus family physician in cities is almost extinct, and in another generation or two may be classed with the icthyosaurus, the mastodon, and the buffalo, as relics of a by-gone age.

The freshman in medicine now selects his specialty, ignoring or neglecting general medicine as much as possible before graduation, then, after a year or so of hospital training, with both eyes still on his own pet organ, enters upon the actual practice of medicine in his self-chosen narrow field. Hence it has come about that the human body is subdivided medically, into many parts, each under the care of a specialist, and the individual desiring health and vigor places himself under the care of a constellation of stars, instead of in the hands of his family physician as in former days.

As is well known, a specialist is one "who *limits* his practice to certain specified diseases, or to the diseases of a single organ or class."* The endeavor to subdivide the body into various parts, each belonging therapeutically to its specialist has been attended by some difficulty, inasmuch as the anatomical and physiological lines of demarkation are indefinite. Hence distinctions have arisen in the attempt to define these limited fields which are almost amusing.

Perhaps the first specialty to develop was that of the eye and ear, though why two organs having anatomically and functionally so little in common, should be classed together is not clear. The relations of the heart and stomach are closer and more interdependent, and they are also close neighbors. The gynecologist chose as his field the diseases peculiar to women, which has been extended by some well known men to include obstetrics and circumcision of the male child. Ultimately this specialty, nominally bounded by sex lines, reached out to include abdominal surgery in both sexes, a rather frank confession of the inadequacy of the arbitrary limitation. The dermatologist has selected as his field lesions of the skin, but includes syphilis. Why not as well include scarlatina and smallpox, which are also constitutional diseases having dermatological lesions? The gastro-enterologist has as his field diseases of the gastro-intestinal tract, but is expected to, and often does treat medically anything between the diaphragm and Poupart's ligament.

The proctologist, whose field was originally the rectum, now includes from below upwards the entire alimentary tract, and might be more fitly termed the surgical gastro-enterologist.

The genito-urinary specialist has both sexes in his clientele and his unselfish disposition is demonstrated by his failure to include operative gynecology and obstetrics in his field, where they rightly belong according to his selected title.

I have mentioned but a few of these special fields which in the present developmental state include almost every special organ of the body and hence all dis-

*Read before the Lenawee County Medical Society, March 9, 1909.

*Gould's Dictionary of Medicine.

eases affecting special organs.

Diphtheria certainly belongs to the throat man, pneumonia, tuberculosis and heart diseases to the chest man; typhoid to the gastro-enterologist, and so forth *ad infinitum*. So far as I can ascertain the only things rightly belonging to the general practitioner are acute colds before coryza or bronchitis develop, perhaps muscular rheumatism if interference with gastro-intestinal metabolism cannot be clearly proven, and chilblains, although this is in doubt, the weight of authority leaning toward classing, chilblains as dermatological lesions. The thyroid and the lympathic system have thus far evaded discovery, but doubtless will soon be taken by ambitious young men who find the other specialties overcrowded. I know a man who is now advertising his specialty somewhat, directly to the laity. He limits his practice strictly to running sores and ulcers of the leg. His cards bear his photograph and the war cry, "I heal sore legs." He is one of the real specialists in his city, in that he limits his practice absolutely to his chosen field.

In a way we are all specialists now in city practice, if not strictly so in the true meaning of the word—at least general specialists. Of specialists there are two kinds, the cultivated or highly fertilized type, making a more or less honest effort to conform to the limitations of the field chosen, and the common or garden variety, which is a specialist to the laity and a general practitioner to the profession. The true specialist is a man who after long experience in general practice has found himself with more love and more fitness for certain things and decides to limit his work to those special lines. He thus acquires special facility in diagnosis and special ability in treatment, and becomes the ideal consultant. The profession, however, has a right to expect that he will limit his work to his specialty and not use the reputation thus acquired to draw general business.

The young graduate who adopts a specialty upon entering practice is somewhat of a machine-made specialist, having about the same knowledge of general medicine as the automobile expert who knows everything about carburetors, but little or nothing about automobiles.

The common or garden variety of pseudo-specialist is at present a weed capable by cultivation, perhaps, of development into a useful plant, but occupying ground more properly belonging to flora of more value to the human race.

The inquiry is very pertinent, whether either the profession or the public benefits by medical specialism in its present development? The tendency to accept specialists just out of college is undoubtedly a bad thing for the public. The tendency to assume the title without conforming to its obligations is undoubtedly bad for the profession, and the tendency of the public to regard specialism as the fountain head of all medical wisdom is equally bad for both the public and the profession.

The passing of the family physician, as a trusted adviser, is much to be regretted, for the layman without medical knowledge is unable to choose wisely the best specialist for his self-diagnosed malady, or even to decide intelligently whether he needs the services of a specialist at all. Nevertheless he prescribes a specialist for himself, much as he often prescribes drugs for himself, on the advice of an equally ignorant friend or neighbor, and any man with any reputation as a specialist finds much business coming direct to him which is in no way referred by the family physician.

It is a debatable question whether the human body, which is a complex organism of many intimately correlated and mutually interdependent parts, can be advantageously subdivided to provide for

the many specialties which are now in vogue.

How is it possible to isolate one organ, for example the eye or the stomach, from the rest of the body, with which it is anatomically and functionally connected, and treat the organ by itself, except for pathological lesions which are entirely local? The oculist may be treating diseases of the eye in correcting errors of refraction, but in treating ocular conditions due to syphilis or to arteriosclerosis he is practicing general medicine.

The stomach specialist is within his field when treating dietetic or digestive errors, but when the disturbance of function is due to ocular, uterine, or renal abnormalities, he must practice general medicine to relieve his patient.

If it be true, then, that even the specialist himself cannot isolate his own organ, except at times, the very term itself is a misnomer, since it designates a physician who limits his practice to diseases of a single organ or class.

Would it not be infinitely better if the specialist were to take the honorary title and occupy the field rightly belonging to him, that of consultant?

The field of medicine is broad and offers ample opportunity for the man of experience, who may wish to do much of certain kinds of work and little of others, and his evolution into a practitioner who refuses some kinds of practice and devotes special attention to others is a perfectly natural one, for, as the result of special study and large experience, one may develop particular expertness along certain lines of practice, and thus become the man to whom others, less expert, naturally turn for assistance in diagnosis and treatment.

Especially is this true of the more delicate operations in surgery and in the use of diagnostic instruments, such as the opthalmoscope, the laryngeal mirror, the stethoscope, or cystoscope.

There are no secrets in regular medicine and every advance the world over soon becomes the property of the entire profession. The growth of the specialties has added much to the sum total of professional knowledge. The dangers of mastoid disease, or appendicitis, or of beginning malignant disease are appreciated by the mass of the profession, as they would not have been but for the constant driving home of the facts by the specialists. And yet the specialist has nothing in his armamentarium but what study, experience, and a perfected technique will bring to every practitioner.

It is often urged that the field of medicine is so large that one mind can only grasp a part of it successfully. Hence, we are told, surgery must be divided into several dozen fields and medicine as well.

To a good anatomist with normal eyesight and nimble fingers, the technique of surgery is the easiest thing in medicine. However, it requires much practice to become a rapid, skillful, operator, and brains will always differentiate the surgeon from the cutter. Why, then, should the surgeon tie the carotid and leave adenoids for the throat man, tap an abdominal but not a pleural effusion, remove a spleen but not a uterus?

Equally true is it in the field of medicine that if the practitioner is fitted to practice at all, he is competent to cover the field in the treatment of the pathological conditions of the various interdependent organs of the body, supplementing his own diagnostic and therapeutic skill by the assistance and counsel of the expert.

There are but two natural subdivisions of medical practice—surgery and medicine.

The man doing all kinds of work cannot do surgery as well as the surgeon who does little else and the converse is equally true.

The fact that the general practitioner

often tries to do major surgery is only indicative of his desire to make an honest living.

The specialist is sometimes accustomed to consider a special case as his own during the entire period of convalescence, and also thereafter, hence the general practitioner is inclined to avoid consultation with a specialist, fearing the loss of his prestige and perhaps his patient, instead of welcoming the assistance of expert advice, as he should.

That a problem exists in the subject matter here laid before you, of vital importance to the future of medicine, most thinking men will agree. That its solution will come naturally within the next quarter century is the belief of the writer. Its solution lies in the gradual development of the medical school and the medical student now under way. The proprietary medical school is rapidly passing and with it goes the illiterate student. A college graduate presents a soil fertile for the implantation of a medical education far superior to that offered by the man fresh from the plow or the bench.

With the improvement in quality of the medical graduate will come diminution in quantity, because the added expense of the good education to be required by state examining boards will deter many men, of the type that formerly studied medicine, from entering the profession.

Only the incompetency of many members of the profession for other than routine practice ever allowed specialism to develop in its present manifold forms.

The broadly educated and well taught physician of the next generation will be able to do for his patient practically all that a dozen specialists do for him today, and the specialist will find himself filling the field which he ought to occupy, that of the consulting expert.

In communities such as yours, you do not find your patients floating from specialist to specialist to find something which was lacking in you. Why? Because for one reason they lack the stimulus of custom in the fad-chasing habit, and also because in the main you are better all round practitioners than the city men. You have supplemented the possible deficiencies of your medical training by the stern necessity of self-reliance in many emergencies.

You maintain the health of your community, trusted by your clientele as we are not, since you are not expected to furnish them the latest medical fashions as are we. You have some men who excel in certain things and utilize them to assist you in difficult cases. They are consultants, not specialists.

You may send your major surgery and perhaps your eye, ear, nose and throat work to the city, but all other conditions you treat yourselves with the occasional aid of a consultation in some unusual or obscure case.

Statistics show that neither longevity, health, nor happiness are lessened by life in rural communities, hence it seems a fair inference that much of the modern medical faddism existing in cities is not really essential to physical well being.

You typify, then, the ideal medical conditions of the, I hope, not too distant future, when all well trained and experienced practitioners will be adjudged competent, and *will* be competent, to treat most pathological conditions occurring in the families entrusted to their care.

The prognosis in tuberculous diseases of bones and joints in children has been improved more by the practical application of the fresh air treatment than by any other means. The next step in surgical enlightenment is to apply the same treatment to other surgical disease.—*American Journal of Surgery.*

The Journal of the Michigan State Medical Society

All communications relative to exchanges, books for review, manuscripts, advertising and subscriptions should be addressed to B. R. Schenck, M. D., Editor, 502 Washington Arcade, Detroit, Mich.

The Society does not hold itself responsible for opinions expressed in original papers, discussions or communications.

Subscription Price, $2.00 per year, in Advance.

SEPTEMBER

Editorial

TO US AS PHYSICIANS THE FIRST OF OUR AIMS MUST BE OUR DUTY TO THE SICK. TO LOSE NO OPPORTUNITY TO IMPROVE OUR KNOWLEDGE AND OUR METHODS; TO ADHERE TO THIS AIM AND STEADFASTLY REFUSE TO BE LED ASTRAY AFTER LESS PRESSING DUTIES, OR TO BE TANGLED IN ANY OF THE MANY SIDE-PATHS OPENING ALLURINGLY BEFORE OUR FEET —IS TO WIN THE HIGHEST SUCCESS ATTAINABLE BY US, AND TO FULFIL BEST THE TRUE OBJECT OF OUR EXISTENCE. MAY WE ALL FIND THAT, AS WITH SOLOMON, THE CHOICE OF WISDOM BRINGS WITH IT THE POSSESSION OF ALL OTHER GOOD THINGS.—*American Journal of Clinical Medicine.*

* * *

Lodge practice is one of the economic questions which should interest every active practitioner, for it is undoubtedly on the increase in America, and the time will soon come when it must be intelligently discussed, and active measures taken to curb it. Already, in certain sections of the country, it has become of the greatest practical moment to the practitioners; it has ceased to be merely an academic question; it menaces the standing of the profession and decreases their individual and average income.

The American Academy of Medicine, at its last meeting, held a symposium on contract practice and discussed nearly every phase of the topic. A very full abstract of the discussion appears in the *Journal of the American Medical Association,* for August 7th, and should be read by every interested member of our society, meaning every member who has the good of the profession at heart, whether or not he may be individually affected by the evil. As Doctor Benedict of Buffalo said in this discussion, the ethical and economic evils involved are not intrinsic but circumstantial, the trouble largely being that the recompense is not always calculated at an adequate rate to provide competent care. There are certain forms of so-called contract work, such as that in force at mines, in lumber camps and for railroads, which are necessary, entirely unobjectionable and wholly without the scope of this discussion. The physicians engaged in these forms may well be classed with those holding any salaried position, such as the directors of insurance companies or the members of the staff of the various state institutions. This sort of work is vastly different from that of lodge and sick benefit contract work, and in any discussion of the subject, a sharp distinction between the two should be made.

It is the growing evil of lodge practice, "the buying of our services at wholesale and the selling of them at retail," some laymen pocketing the profits, which must be, in the near future, thoroughly discussed and fought out to a finish. In this discussion the point made, or to be made by Doctor Warthin in his paper at Kalamazoo (see abstract), must be taken into consideration. He will point out that the practice of medicine is gradually undergoing a change, that

an evolution is occurring whereby the prevention of disease is taking the place of the curing of disease. In this connection Doctor Benedict says that "from an economic standpoint the interests of the average physician require some change from the present narrow method of rendering service to the laity and attempting the broader function of adviser to the community." This phase of the question, however, borders on the academic; practically, we cannot escape the conclusion that not only is the doctor's income being lessened by the splendid results thus far obtained in preventive medicine, but it also suffers, in some communities at least, from the pernicious and growing evil of lodge practice.

If a physician had a contract with a lodge by which he was paid for each case the customary and regular fees obtained by his competitors, he might be taking an unfair advantage of his colleagues, but, nevertheless, the basic principle on which the objection to contract work is made, i. e. the cheapening of service and the temptation to do careless and indifferent work, to the detriment and shame of the whole profession—would not be violated and little argument could be brought up against it. But are there any such contracts? We have, rather, the spectacle of a doctor accepting $1.00 or $1.50, more or less, from each member and agreeing to attend him for a year, the doctor receiving in some instances an average fee of seven and one-half cents a visit for his year's work. What kind of service can he give? What kind of equipment can he keep up? What kind of books can he read? What kind of an impression can he leave with the laity as to medical men and medical things generally?

What are we to do about it? At every meeting of the state society there should be an hour set aside to discuss matters of this kind; in every county society, one meeting a year ought to be given up to talking over economic questions of general interest. Provision has been made in this year's program for the discussion of economic questions. By such discussions a sentiment against lodge practice should be created and maintained, and its evils should be thoroughly drilled into every student in every medical school in the land.

The committee of the British Medical Association, appointed two years ago to study the question, recommended the following:

1. Let there be lodges or fraternal insurance companies, but have the doctor paid a fee, even bulk, more in proportion with the work done.
2. Let the membership in these organizations be limited to those whose wage is incommensurate with the needs of the family.
3. Have the medical management of the lodges in the hands of the local medical society or a committee of the society.
4. Have those physicians who are willing to do this work form a directory from which the individual lodge member may make his selection of his physician.

Two years ago, at Saginaw, we had a discussion of the subject and some good was accomplished. The question ought to be again brought up at Kalamazoo.

* * *

The Treatment of Tetanus. Within the last few years considerable progress has been made in our knowledge of the treatment of this disease. Following the discovery of antitetanic serum, great hopes were entertained that we had at last found a method of treatment which would greatly reduce the mortality. Unfortunately these expectations have not been realized. Trendelenburg very aptly expressed the situation when he said "Die leichteren Falle heilen auch ohne, die schweren sterben auch mit Serum" (the milder cases get well without serum and the severer cases die with it). We have expected too much from serum treatment. This probably comes from a misunderstanding of what

serum can accomplish. We have seen cases of diphtheria rapidly improve following the injection of antitoxin and have expected antitanic serum to do the same thing, forgetting that the symptoms of tetanus are in a vast majority of cases not the result of a toxemia, but follow the combination between the nerve cells and the tetanus toxin. Antitanic serum will neutralize the toxin in the blood, but it will not break up the nerve cell-toxin combination. As a prophylactic, however, it is of the greatest benefit, and should be used in all suspected cases.

The great problem in the treatment of tetanus is to keep the patient alive until the body can overcome the effects of the combined toxin. To do this the muscular contractions must be controlled and the elimination aided, at the same time keeping up the strength of the patient. Of these, the problem of muscular control has been the most difficult to meet. Morphine, chloral and bromide have proven inefficient for this, although recently Cuban writers have claimed good results from the use of enormous doses of chloral. However, Huntington, of San Francisco, at the last meeting of the American Surgical Association, reported a case in which he had pushed chloral to the limit without effect.

Baccelli and the Italian authors in general have secured very good results with the subcutaneous use of carbolic acid. Outside of Italy, however, the results have been far from satisfactory.

Following the discovery of Meltzer of New York, of the sedative action of magnesium sulphate when injected intraspinally, this method was applied to the treatment of tetanus. Some remarkable cures have been thus effected; on the other hand, some cases have been killed —notably Lenormant's. As pointed out by Wallace, the margin between the therapeutic dose and the fatal dose is very small. Too small a dose will not affect the disease, while one only a little larger will kill the patient.

The attention of our readers is particularly called to the paper by Hutchings, read at the last meeting of the American Surgical Association, an abstract of which appears in the Department of Surgery. He has secured remarkable results in six cases by the administration of chloretone, which drug possesses the advantage of ease of administration and safety. All that is claimed for chloretone is that is controls the muscular spasms. It has no effect on the toxin. If Hutchings' results are confirmed by others, it will be a great advance in tetanus therapy. The application of the method is very easy and the results thus far obtained fully justify its trial in every case.

However, the great problem of finding something which will break up the combination between the toxin and the nerve cells is still before us.

♣ ♣ ♣

The Forty-fourth Annual Meeting of the State Society will convene in Kalamazoo, at the Congregational Church, on Wednesday morning, September 15th. Since the first of the year a committee from the Kalamazoo Academy have been, by day, working on the arrangements and, by night, dreaming of what they can do to make us comfortable and give us a good time. They have worked out all the details in a splendid manner and if they are not rewarded by a large registration they will be greatly disappointed.

The meetings will be held at the Y. M. C. A., where the registration and exhibit will be held, and at the Congregational Church adjoining. The House of Delegates and the Surgical Section will convene in the auditorium of the Y. M. C. A., and all other meetings will be held in the church, including an

address on Wednesday evening, on "Mind Cures in General and the Emmanuel Movement in Particular," by Dr. Archibald Church, Professor of Nervous Diseases in Northwestern University. After this address there will be an entertainment and general good time at the Elks' Temple. The committee are not giving out the details of this event.

We have never had a better program. It will be found almost complete in this issue. There are many papers interesting to everyone. It will be necessary for the chairmen of the sections to enforce the 15 and 5-minute rules in order to complete the program, but every essayist will have had ample notice to cut down his paper so as to get it within the time limit and need not feel hurt if he is interrupted.

Our former president, Dr. Inglis, in speaking of one of the annual meetings, said: "Look at the program and decide if you can afford to miss the papers, decide even more carefully whether you can afford to miss the stimulus of contact with your old-time friends, with keen, enthusiastic men. Bring your wife and daughters; bring your own enthusiasm and carry back a fresh enthusiasm to your work. You may miss two days from the daily grind of practice, but your patients, in the months to come, will feel your enthusiasm and esteem you as a man who keeps up with the profession."

♣ ♣ ♣

The Presidents of the State Society since its foundation in 1866, have numbered forty-three. Among them will be found some of the best known names among the citizens of the state. The list has not been published since the old days of the "Transactions," and it is here brought down to date to refresh the minds of our older members and to instruct those of us who personally knew but a few in the list.

Presidents of the Michigan State Medical Society 1866-1909.

1866. C. B. Stockwell, Port Huron.
1867. J. H. Jerome, Saginaw.
1868. Wm. H. DeCamp, Grand Rapids.
1869. Richard Inglis, Detroit.
1870. I. H. Bartholomew, Lansing.
1871. H. O. Hitchcock, Kalamazoo.
1872. A. B. Palmer, Ann Arbor.
1873. E. W. Jenks, Detroit.
1874. R. C. Kedzie, Lansing.
1875. Wm. Brodie, Detroit.
1876. Abram Sager, Ann Arbor.
1877. Foster Pratt, Jackson.
1878. Edward Cox, Battle Creek.
1879. George K. Johnson, Grand Rapids.
1880. J. R. Thomas, Bay City.
1881. J. H. Jerome, Saginaw.
1882. G. W. Topping, De Witt.
1883. A. F. Whelan, Hillsdale.
1884. Donald MacLean, Detroit.
1885. E. P. Christian, Wyandotte.
1886. Chas. Shepard, Grand Rapids.
1887. T. A. McGraw, Detroit.
1888. S. S. French, Battle Creek.
1889. G. E. Frothingham, Detroit.
1890. L. W. Bliss, Saginaw.
1891. Geo. E. Ranney, Lansing.
1892. Chas. J. Lundy, Detroit.
1893. Eugene Boise, Grand Rapids.
1894. H. O. Walker, Detroit.
1895. Victor C. Vaughan, Ann Arbor.
1896. Hugh McColl, Lapeer.
1897. J. B. Griswold, Grand Rapids.
1898. E. L. Shurly, Detroit.
1899. A. W. Alvord, Battle Creek.
1900. P. D. Patterson, Charlotte.
1901 Leartus Connor, Detroit.
1902. A. E. Bulson, Jackson.
1903. W. F. Breakey, Ann Arbor.
1904. B. D. Harison, Sault Ste. Marie.
1905. C. B. Stockwell, Port Huron.
1906. David Inglis, Detroit.
1907. Herman Ostrander, Kalamazoo.
1908. A. I. Lawbaugh, Calumet.

Secretaries of the Michigan State Medical Society 1866-1909.

1866-1886. George E. Ranney, Lansing.
1886-1890. Geo. Duffield, Detroit.
1890-1895. C. W. Hitchcock, Detroit.
1895-1900. Collins H. Johnston, Grand Rapids.
1900-1906. A. P. Biddle, Detroit.
1906-1909. B. R. Schenck, Detroit.

A. J. Lawbaugh, M. D.

President 1908 - 1909

A. I. LAWBAUGH, M. D.

President 1908-1909.

Dr. A. I. Lawbaugh, the retiring president of the Michigan State Medical Society, was born in Ohio, in the year 1844. After graduating from the Trenton High School, he, like so many of our profession, taught school for five years, when he decided to enter the profession of medicine.

As was customary in those days, and even extending down to the almost immediate past, our President began study for his chosen profession with an old and honored practitioner, one Doctor Brown, of Genesee, Illinois. After remaining in this office for three years, he entered Rush Medical College and remained one year. Here he met as a fellow student, Dr. E. Fletcher Ingalls, and the friendship thus formed in the plastic years of youth, has ripened into the sweet mellow of beauty, as the years of age are approaching. Leaving Rush, he entered Long Island Medical College, from which he graduated in 1870, receiving the interneship by competitive examination. He served in that capacity for one year, when he came to Northern Michigan—to the then new fields of the Copper Country. Dr. Lawbaugh came as the resident physician of the Phoenix Mining Company, which position he held for twelve years. This was in the pioneer days of '71. From the Phoenix he was called to be Chief Surgeon of the Osceola-Tamarack Companies, a position full of responsibility, in consequence of the many accidents which happened because of the changing conditions of mining. This gave him a very large practice in fractures and his great ability as a surgeon was soon recognized throughout the Upper Peninsula.

In 1884, he operated for ovarian tumor for the first time. This was in the early days of asepticism. The operation was performed in the upper room of his office, which had, during the year, been used for a school room. A few of the seats were removed and a space of not more than thirty feet square was scrubbed and otherwise cleaned. An abdominal operation performed under such conditions can not be appreciated by the younger men of today, yet his patient recovered and left the primitive hospital in the usual time allotted for such patients of today. When we realize the year of his graduation, his almost immediate transfer to the then unknown regions of the Upper Peninsula, he may certainly be classified among the pioneer surgeons of our State.

Feeling that a more thorough equipment was necessary to do the surgical work demanded of him, in 1890 he became a special student under Doctor Gerster, at Mt. Sinai Hospital, New York.

In the earlier years of his surgical work all of the operations were performed in private dwellings and the patients were nursed by friends; yet with these drawbacks and with none of the common advantages attained in our large centers of medical work, his work of that time will compare favorably with the results elsewhere obtained.

Personally Doctor Lawbaugh is, and ever has been, the friend of young men. Many men in the Copper Country today who are doing good, first-class work, have received their first inspiration toward a broader and higher ideal in medicine and surgery from Doctor Lawbaugh—the "Father of Modern Surgery in the Upper Peninsula of Michigan." And his parting admonition to his assistants, as they have gone out from him into the great world of allurement and detraction, should be written over the parting doorstep of all our universities, viz: "When you cease to be a student you cease to be a scholar."

Book Notices

Hand Book of Diseases of the Rectum. By Louis J. Hirschman, M. D., Fellow American Proctologic Society; Lecturer on Rectal Surgery and Clinical Professor of Proctology, Detroit College of Medicine; Attending Proctologist, Harper Hospital; Consulting Gynecologist, Detroit German Polyclinic; Collaborator on Proctology, "Physician and Surgeon"; Editor "Harper Hospital Bulletin"; chairman, Section on Surgery, Michigan State Medical Society; Ex-President Alumni Association, Detroit College of Medicine, etc., etc. Octavo; 374 pages; 147 illustrations, mostly original, including two colored plates. Cloth, $4.00.

This book, by one of our well-known members, will be read with much interest, for it contains the things which the general practitioner wants to know. It has two strong features, namely, diagnosis set forth in a clear and readily understandable manner and methods of treatment which nearly everyone can easily apply. One lesson which the author tries to inculcate by marked emphasis is the absolute necessity of careful, painstaking and frequent examinations. Methods of examination are given in detail and minutely pictured. Proper stress is laid upon the necessity for early recognition of malignant lesions and the family doctor urged to be on the lookout for cases, as only by the early diagnosis can there be hope of good therapeutic results.

Chapters are devoted to constipation and obstipation, fecal impaction, pruritus ani, anal fissure and ulcer, abscess of the anorectal region, fistula in ano, hemorrhoids, rectal polypi, proctitis and sigmoiditis, dysentery, prolapse of the rectum in children, the feces and their examination.

The illustrations which, for the most part, are original, are unusually good. The paper, binding and letter press are the best which the Mosby Company has yet issued and it is a pleasure to see the quality of the work of this comparatively new firm improving.

We recommend this book for general use and congratulate the author on having done his work so well.

Bier's Hyperemic Treatment in Surgery, Medicine and All the Specialties: A Manual of Its Practical Application. By Willy Meyer, M. D., Professor of Surgery at the New York Post-Graduate Medical School and Hospital; and Professor Dr. Victor Schmieden, Assistant to Professor Bier at Berlin University, Germany. Second Revised Edition. Octavo of 280 pages, illustrated. Philadelphia and London. W. B. Saunders Company, 1909. Cloth, $3.00 net.

But little over a year ago, we published a review of the first edition of this excellent work. Since its first appearance four large reprints have been exhausted and the authors, than whom no one is more competent to write on the subject, have taken advantage of the opportunity of a second edition to revise the text and incorporate illustrative case histories. An excellent feature which is also new is the list of articles on the subject.

It is an almost indispensable book for one who wishes to keep abreast of the times, for it has been abundantly proven that the Bier method is no fad.

Treves' Operative Surgery. New (3d) Edition. A Manual of Operative Surgery. By Sir Frederick Treves, Bart., F. R. C. S., Serjeant-Surgeon to H. M. the King, Surgeon-in-Ordinary to H. R. H. the Prince of Wales, Consulting Surgeon to the London Hospital; and Jonathan Hutchinson, F. R. C. S., Surgeon to the London Hospital. New (3d) Edition, revised and rewritten. In two octavo volumes. Volume I. 775 pages, with 193 engravings and 17 full-page plates. Half-morocco, $6.50, net. Lea & Febiger, Publishers, Philadelphia, 1909.

The growing appreciation of the highest class of foreign medical literature is shown in the demand for successive editions of such pre-eminent works as Treves' Operative Surgery. This new edition has been completely rewritten at the request of Sir Frederick Treves by his colleague, Jonathan Hutchinson. The illustrations have been equally brought to date with new figures and a number of original colored plates.

The earlier editions of the work are well known to all readers of surgical literature. In general the arrangement has been preserved in this new edition. The opening chapters deal with general considerations and are followed by 600 pages containing the whole of the great department of Abdominal Surgery, including hernia and gynecological surgery, genito-urinary surgery, and operations on the rectum. In order to accomplish so much in so few pages, the matter is put in an intensely practical manner.

Like most books by the English, the style is excellent. Few medical books are printed and bound as attractively as is this. The edition is small and the price somewhat dear, but one will be well satisfied with the purchase, and will enjoy its possession.

The Practical Medicine Series. Under the general editorial charge of Gustavus P. Head, M. D. Vol. IV., 1909. Gynecology. 225 pages. Cloth, $1.25. Chicago, The Year Book Publishers, 1909.

In the fourth volume for the year Dudley and Bachellé review recent gynecological literature, dividing the subject into six sections as follows: General Considerations. Infections. Malformations and Tumors. Traumatisms. Displacements. Disorders of Menstruation and Sterility. Particularly interesting is the review on plastic perineal work, which is amply illustrated.

The Practical Medicine Series. Under the general editorial charge of G. P. Head, M. D. Vol. V., 1909. Obstetrics. 236 pages. Cloth, $1.25. Chicago, The Year Book Publishers, 1909.

De Lee's contribution each year to this series is always excellent and the 1909 effort is no exception to the rule. In the preface, he says that there have been no important discoveries during the past twelve months, and that the operative trend of obstetric practice continues. Extraperitoneal Cesarean section is taking the place of hebosteotomy. Cesarean section for placenta previa is being taken up in Germany.

Eclampsia is still a mystery, but the newer statistics emphasize again the value of immediate delivery. Much good work is being done on the toxemias of pregnancy.

All of these points and many others of an everyday nature are discussed.

County Society News

Houghton.

At a recent meeting of the Houghton County Society the subject of medical defense was discussed and the society's delegate unanimously instructed to vote in favor of the plan.

JOHN MCRAE, *Sec'y.*

Ottawa.

The regular August meeting of the society was replaced by a most enjoyable picnic.

The program for the meeting on September 14th comprises papers on the eye, ear, nose and throat, as follows:

1. Diseases of the Eye in General Practice, A. Leenhouts, Holland. 2. Diseases of the Ear in General Practice, J. H. Mowers, Fennville. 3. Diseases of the Nose and Throat in General Practice, H. J. Cherry, Spring Lake.

The annual meeting, for reports and election of officers, will occur on October 12th, when the following scientific program will be carried out:

1. The Effect of Kidney Lesions on the Heart and Bloodvessels, J. B. Whinery, Grand Rapids. 2. Post-mortem Appearances of the Different Forms of Nephritis, J. H. R. Gervers, Jenison. 3. The Treatment of Bright's Disease, H. A. Stroud, Douglas.

St. Joseph.

The St. Joseph County Society held a splendid meeting at Constantine on July 21st, when the following program was carried out:

The Diagnosis and Treatment (Medical and Surgical) of Gallstones, Dr. L. K. Slote, of Constantine.

Discussion—Dr. J. R. Williams, White Pigeon; Dr. F. C. Kinsey, Three Rivers.

The Diagnosis and Treatment of Typhoid Fever, Dr. W. C. Cameron, White Pigeon.

Discussion—Dr. J. H. O'Dell, Three Rivers, and Dr. S. R. Robinson, Sturgis.

The Diagnoses and Treatment of Summer Diarrhœas of Infancy, Dr. A. J. East, Constantine.

Discussion—Dr. Mardin Sabin, Centreville, and Dr. W. A. Royrer, Mendon.

The Diagnosis and Treatment of Appendicitis, Dr. R. E. Dean, Three Rivers.

Discussion—Dr. F. W. Clements, Burr Oak,, and Dr. A. W. Scidmore, Three Rivers.

The Treatment of Inevitable Abortion, Dr. D. M. Kane, Sturgis.

Discussion—Dr. F. A. Pratt, Centreville, and Dr. J. J. Kelly, Burr Oak.

F. C. KINSEY, *Sec'y.*

News

Dr. J. H. Warner, formerly of 698 Woodward Ave., has returned from Europe and has opened offices in the Bowles Building, corner of Grand River Avenue and Griswold Street. Dr. Warner will devote his time to diseases of the nose and throat.

Dr. H. S. Smith, formerly of Negaunee, has entered practice at Ishpeming and is on the staff of the Ishpeming Hospital.

The date for the next meeting of the American Medical Association has been fixed for June 7th to 10th. St. Louis is the place.

Dr. Hugo Freund has been appointed chairman of the Program Committee of the Wayne County Society for the coming year.

Dr. A. W. Imrie, of Detroit, who has been traveling in Europe, attended the International Congress.

Dr. Eugene B. Pierce, a graduate of Williams College and the University of Michigan, has been appointed Superintendent of the State Tuberculosis Hospital at Howell.

Dr. A. S. Kimball, of Battle Creek, who has been working in pediatrics in England, attended the recent meeting of the British Medical Association.

Deaths

Alfred B. House, formerly of Memphis, died at his home July 9th. Dr. House was 74 years of age and graduated from the University of Michigan in 1866.

Obituary

Edwin H. Van Deusen, A.M., M.D.

In the death of Dr. E. H. Van Deusen, on July 6, 1909, the profession of Michigan loses from its active membership one who faithfully served the State and who has left his imprint upon the special work to which he was devoted and in which he did pioneer service.

Born at Livingston, New York, August 29th, 1828, of Knickerbocker parentage, that substantial Dutch stock from which so many fine and staunch characters have sprung, he graduated from Williams College at twenty, and three years later received from his alma mater the degree of Master of Arts, graduating at this time from the College of Physicians and Surgeons, New York City. He then served for a time on the staff of the New York Hospital and was one of the few who, stricken while on service during a very fatal epidemic of typhus fever, yet recovered. A little later he was appointed an Assistant Physician to the Utica Asylum for the Insane, becoming eventually its First Assistant Physician. While in Utica, he was for a time editor of the *American Journal of Insanity*. In 1848, the Michigan Legislature made preliminary provision for the Michigan Asylum for the Insane, and in 1855 Dr. Van Deusen was appointed to be Medical Superintendent. He continued for a time in his position at the Utica Asylum, but acted in an advisory or supervisory capacity to the Michigan authorities. He was thus able to correct some very inadequate conceptions as to what should be the size and suitable location for such an institution. He visited Kalamazoo frequently during 1855, '56 and '57, taking up his residence there in 1858, shortly after his marriage to Miss Cynthia Wendover, of Stuyvesant, N. Y. He seems to have been of active assistance in securing the first large appropriation of $100,000 from the legislature for asylum purposes, and himself superintended the erection of the buildings.

Michigan's first asylum was formally opened August 29th, 1859, and Dr. Van Deusen's administration of its affairs proved capable and forceful and continued until his resignation in February, 1878, because of ill-health. This period of his active service was one of pioneer work in the treatment of the insane, and Dr. Van Deusen was a thoughtful student, a clear thinker, a fine executive. He was one of the earliest to differentiate neurasthenic cases, and to this neurosis he gave the name, "neurasthenia," although this service has been commonly but erroneously attributed to another.

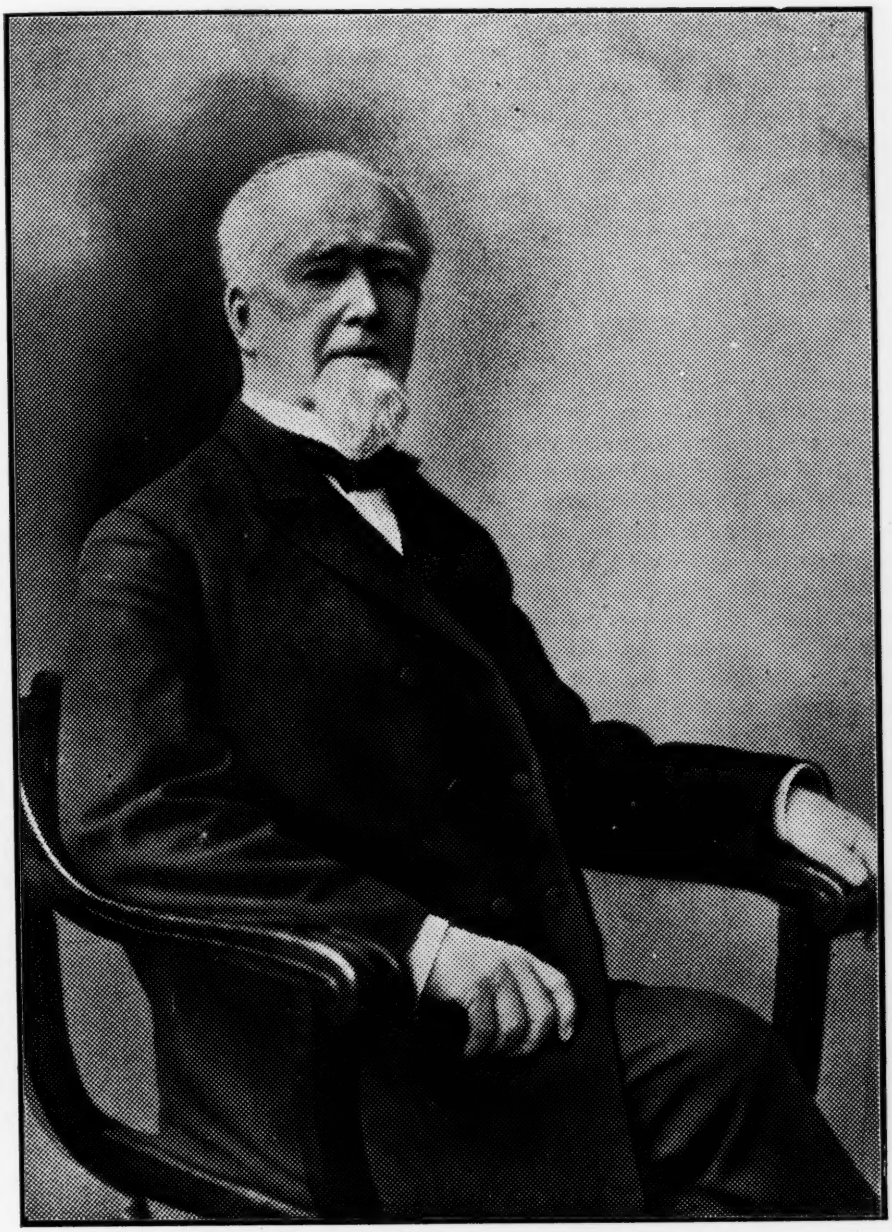
Though naturally a man of great modesty and reserve, his obvious interest in his patients' welfare, his gentle tact and courteous treatment won for him the love of a host who had been his patients. One who was long one of his assistants says that he earnestly impressed upon his assistant physicians the importance of the personal influence of the attending physician and expressed the belief that this often had more, even than medicine, to do with the restoration of the patient to mental health.

The State was not indifferent to the high class of ability displayed by Dr. Van Deusen and called upon him several times for active service apart

from his regular duties. He served as a member of the commission appointed to select the site and superintend the construction of the Eastern

member of the State Board of Corrections and Charities.

Aside from these semi-public duties, he lived



DR. E. H. VAN DEUSEN

Michigan Asylum (which was opened August 6th, 1878), and he also served in a like capacity to the Northern Michigan Asylum (opened in 1885), and from 1881 to 1885 he served as a

a life of quiet retirement in Kalamazoo, wisely enjoying such means as had come to him and Mrs. Van Deusen. So unostentatious have been their deeds of kindness that none can ever know

their number or extent, but there is ample testimony that in quiet ways they have let sunshine into many darkened lives. Their larger gifts are only known because they were given to and are enjoyed by an appreciative local public. They are the Public Library building, one of Kalamazoo's most appropriate and useful buildings, the St. Luke's Parish House, and a substantial gift to Bronson Hospital. In the Public Library building, Dr. Van Deusen provided, with characteristic forethought, that apartments should be reserved for the uses of the Kalamazoo Academy of Medicine. It was the wish of Dr. and Mrs. Van Deusen that the least possible publicity should attach to their connection with these gifts, and by their request formal openings, likely to give occasion for lauding the donors, were carefully avoided.

Dr. Van Deusen was a man naturally reserved, of quiet dignity, but yet kindly and genial. It has been the writer's privilege for many years to catch occasional glimpses of the beautiful home life of the doctor and his cordial wife and the hospitality here extended to the friends welcomed into that home was ever of a kind to make welcome its repetition. His wife has always been equally interested in all that claimed the doctor's life and attention, and they have been joint givers in all their philanthropies. She, with a son, Robert T. Van Deusen, of Newburgh, New York, survives him.

Dr. and Mrs. Van Deusen planned wisely their memorials and lived to enjoy their increasing usefulness. In all the interests of the Public Library Dr. Van Deusen was especially concerned, and since its dedication his face had been a familiar one in the building which they had given.

A beautiful Christian life, in all that this implies, has been that of Dr. and Mrs. Van Deusen in Kalamazoo. He had ever been a high-minded Christian gentleman of the finest type, absolutely "integer vitæ scelerisque purus." A fine citizen, a philanthropist, a physician known for notable service, his name will ever be a credit to Michigan, and his work has had not a little to do with setting that high standard among institutions for the care of the insane for which Michigan has been well known. Probably no single influence more than his has served to zealously keep Michigan's asylums apart from politics, and this has done much to maintain their efficiency.

C. W. HITCHCOCK.

Correspondence.

Detroit, August 10, 1909.

To the Editor:

When is a member of the State Society a member, and when not? May I discuss this question in your department of correspondence in the September issue?

Medical defense is becoming an integral part of the work of so many state societies that Michigan will adopt no untried experiment should the House of Delegates decide to put an efficient plan into effect. All of the existing plans provide defense for every member not in arrears, except that Maryland and Pennsylvania have old and but partially effective plans in force, while Kentucky is experimenting with an untried plan of voluntary membership which does not offer the *assurance* of defense to even its *voluntary* members. Inasmuch as some objections have been raised to the proposed Michigan plan and hence to the almost fundamental principle of defense as offered in nearly all the states, it seems pertinent to discuss broadly what medical defense is really for, and *who* should have it. Hence I again crave space in your valuable columns.

Medical defense really means the machinery for defense. In placing it at the disposal of any and every member, a state society in no way justifies or indorses the alleged civil offense of the defendant member, and no affiliated member incurs the slightest actual or moral responsibility to aid in the defense of any accused member, whether he believes him guilty or innocent of the civil charge.

The principal reason why this co-operative defense is advisable is so tersely put by the Medico-Legal Committee of the Illinois Medical Society that I cannot refrain from quoting it: "The law relating to physician's liability (in civil malpractice) is the law of decisions rather than of statutes. It is known to but few lawyers and to fewer physicians. We are sure that most of the physicians' damage suits arise from an ignorance of law on the part of lawyers. The attending physician is required to administer to his patient with due diligence, exercising only such skill as is customary in his neighborhood. There is no guarantee of results. The doctor can make mistakes and those mistakes can result in harm to the patient. Those mistakes may be due to commission or omission. The doctor cannot be held

liable unless he was not reasonably skillful and diligent. It is not required that he give his patient advantage of the latest medical discoveries or be entirely up to date. In fact the law and procedure rather favor over-confidence."

This being the law, we unite for protection against its maladministration by ignorant or unprincipled lawyers.

A malpractice suit usually costs the doctor hundreds of dollars in money, much time and worry, and often much loss of prestige. Since it is true that but rarely is a doctor guilty of actual malpractice in a legal sense, any pooling of interests which will give every member of the State Society access to the many legal decisions directly and indirectly germane to his case cannot but be of great assistance to him in case of need.

If it be proven that this pooling of interests is prophylactic in deterring lawyers from seeking every possible or plausible pretext to find fault with the end results of medical practice, who loses thereby but the lawyer and who gains thereby but the doctor?

The matter does not involve the general public at all. The physician's liability is unchanged. He always has been, is now, and always will be held responsible for the results of ignorance, incompetence or negligence, and the court and jury, whose province it is, should determine his guilt or innocence. The ultra critical medical man has been and even yet is too prone to think, or even say, that a given case treated by him would have yielded different and better results. This is merely a matter of opinion, not of proven fact. He does not know the law or the facts in this specific case, and yet would constitute himself judge and jury in a manifestly unethical, unprofessional and unfair way.

Probably cases of actual malpractice, in a legal sense, do occur occasionally, but since the final determination of what constitutes malpractice rests always with the courts, what legal or moral right has a physician to adjudge a professional brother guilty, *a priori,* when the courts may subsequently find him innocent?

Under the reorganization plan of the A. M. A., every legally qualified, reputable practitioner is supposedly eligible to membership in his County Society, and hence the State Society. We welcome many men who would themselves admit that they are not as well educated, as experienced or even as generally competent as some of the leaders of the profession. We take their money in support of our Society expenses and our State Journal. We inflict upon them our scientific papers and the reports of our wonderful cases. We eat and drink with them and find them good fellows, conscious of their own limitations but eager for broader knowledge, upholding as well as the leaders, and sometimes better, the honor and dignity of the profession. Has then our professional recognition, supposedly so freely extended, a string to it? Can we admit men to full professional affiliation in all other respects, but deny them the privilege of participating in the advantages of co-operative medical defense?

However untenable this view may appear, it has been advanced seriously and in good faith by men otherwise broad-minded, who urge no substitute plan, but announce continued opposition to "any plan that proposes to lend the moral and financial support of the State Society to the defense of *every* suit for civil malpractice that may be brought against *any* member."

It would seem that *any* member of the State Society ought to be entitled to all the privileges of any other member, and I believe it to be absolutely true that the plan of medical defense must be broad enough to cover *every* suit against any member to be of any practical value.

Even a voluntary organization in no way escapes this objection, unless membership be restricted to a select few.

To my mind an objection of this kind arises from an imperfect and faulty conception of so-called medical defense. The State Society maintains a journal which is not read, except occasionally, by all members. It and its component county societies conduct regular meetings which are not participated in, attended by or even appreciated by all members, yet both these advantages are desired by and authorized by a large majority of members. Suppose now that a large majority of the membership of our State Society desire to install a "Legal Information Bureau of Self Help." This bureau would assist any member who desired to use it in determining *the law* regarding his particular case and in presenting the law to the only tribunal whose function it is to pass upon its specific application—namely, the judge and jury.

If the law offers no justification for the alleged civil malpractice of the member, then he has no defense, and must either compromise his case before trial or expect a verdict against him. Except for his small contribution toward the support of this bureau, no member has the slightest ethical or moral obligation to aid its

work other than to continue to indorse the existant rule of equity in all civic life whereby *a man is adjudged innocent until the courts find him guilty.*

. If this Bureau of Self Help is organized, the State Society will not aid any member to evade or shirk responsibility, but will aid him in presenting the *law* forcibly and plainly so that his innocence may be proven, if innocent. If legally guilty of malpractice, no defense will save him. Each man will make his own defense based on the law and the facts.

The rights of the general public remain as now, for the law fixing the responsibility of physicians gives ample protection to the public against ignorant, incompetent or negligent doctors.

We need protection from the public in this matter, rather than they from us. This is an era of litigation. Court dockets everywhere are crowded with countless damage suits, not twenty-five per cent of which have any legal standing. It costs next to nothing to start these suits, and attorneys find enough people willing to settle for small sums, rather than fight, that the business pays. A legislative act requiring plaintiffs in damage cases to deposit security for costs would clear the dockets like magic. But prominent jurists hold that litigation, like salvation, should be free, lest occasionally a poor man be deprived of justice. Hence we need some strong antiphlogistic method of deterring lawyers, ignorant of the law concerning civic malpractice, from harassing the medical profession, and our own proposed Bureau of Self Help offers the best solution of the problem.

We have little to fear from the less competent men in our profession, for they are seldom sued for malpractice. Conscious of their own limitations, they are more cautious and share responsibility with consultants more frequently than stronger practitioners do. With little professional or social standing and little property, they offer little prospect to the shyster lawyer of a cash settlement or a paid judgment.

The man of standing in his community, having or believed to have some financial assets, offers the best bait.

Moreover, careful observation, I think, justifies the conclusion that good practitioners are no more successful than poor ones in avoiding the appearance of evil. We all make mistakes both of omission and commission. We all have expected, and unexpected, bad results. If under the law, rightly understood and adequately presented, we are blameworthy for untoward end results, then let us individually take the consequences. But let the courts decide rather than carping co-workers.

In January, 1908, at the reuest of the Council, I discussed before them the general subject of medical defense. In June, 1908, the House of Delegates provided for a Committee on Medical Defense, who have endeavored to formulate a feasible plan and to ascertain the sentiment of all members regarding it. In November, 1908, the committee sent a letter to each County Society, and since the same date the *Journal* has devoted much space to a consideration of the question, in a broad, educational way, and in August, 1909, a postal card vote of all members was taken.

The endeavor from the start has been to inform the profession upon the subject and to ascertain their wishes.

It seems to me that nothing can be gained by further postponing the final decision which will be made by the action of the House of Delegates. The profession either want the work established or they do not. It is futile to hope for absolute unanimity, for a large number of men never yet have been and never will be absolutely a unit regarding a question of public policy.

Some minor details of the submitted plan can readily be modified, if desired.

But the fundamental principle of equal justice to all is, I believe, essential to complete success in this work.

Other State Societies have had sufficient experience with the essentials of our proposed plan to demonstrate its complete working success. Our plan is the broadest of them all and will, we feel sure, provide every member safe protection against the maladministration of justice from which many men have suffered.

No voluntary organization escapes the fancied objection raised against this plan, while a voluntary organization will be too deficient in money and in adherents to accomplish the most good at the lowest cost.

If after this long and extensive campaign of education we are not yet ready to take up medical defense as one of the advantageous features of membership in the State Society, let us drop the matter entirely, rather than openly admit a double standard of qualification for membership. It may be true that we have both sheep and goats. But no normal eye is perfect enough to be certain of always telling them apart.

And so I say let them run together. The environment cannot harm the goat, and if he occasionally butts a little life into the placid sheep—they need it!

FRANK BURR TIBBALS,
Chairman, Committee on Medical Defense.

PROGRAM OF THE FORTY-FOURTH ANNUAL MEETING OF THE MICHIGAN STATE MEDICAL SOCIETY.

Y. M. C. A. Building and Congregational Church, Kalamazoo, September 15 and 16, 1909.

THE COUNCIL.

Chairman—C. B. Burr, Flint.
Secretary—W. H. Haughey, Battle Creek.

Tuesday, September 14th, 3:30 P. M.
Wednesday, September 15th, 2 P. M.
Thursday, September 16th, 2 P. M.

HOUSE OF DELEGATES.

Y. M. C. A. AUDITORIUM.

President—A. I. LAWBAUGH, Calumet.
Secretary—B. R. SCHENCK, Detroit.

BY-LAWS—CHAPTER IV., Section 1. Each Component County Society shall be entitled to send to the House of Delegates each year one delegate and one alternate for every 50 members, and one for each major fraction thereof; but each County Society holding a charter from this Society, which has made its annual report as provided in this Constitution and By-Laws, shall be entitled to one delegate and one alternate.

First Session, Tuesday, September 14th.

8:15 P. M.

1. Call to order by the President.
2. Roll Call.
3. Reading of Minutes of the last Annual Meeting.
4. Report of the Council.
   C. B. BURR, Flint, Chairman.
5. Report of Committee on Legislation and Public Policy and on the work of the National Legislative Council.
   W. H. SAWYER, Hillsdale, Chairman.
6. Report of the Committee on Medical Defense. FRANK B. TIBBALS, Chairman.
7. Miscellaneous Business.
   (a) Election of Committee on Nominations to nominate:
   1st, 2nd, 3d and 4th Vice-Pres.
   Councilors for the 1st, 3rd, 6th, and 11th Districts.
   Representative in House of Delegates, A. M. A., for 2 years.
   To fix place of meeting for 1908.
   (By-laws, Chapt. VI., Sec. 2 as amended June 12, 1903).
   The House of Delegates shall elect annually, at its first meeting, a Nominating Committee of Five from the House of Delegates, no two of whom shall be from the same Councilor District.
   (b) Action on amendment to Section 3 of Chapter III. of the By-Laws, proposed by W. J. Dubois, delegate from Kent County, at the last session of the House of Delegates at the Manistee meeting, and laid over under the rules. Such amendment adds to Section 3 the following: "No paper shall be read by title nor read by any other person than its author, except as a result of sickness of author or by unanimous vote of the section to which it belongs."
   Section 3 of Chapter III. now reads:
   "Except by special vote the order of exercises, papers and discussions as set forth in the official program shall be followed from day to day until it has been completed"
   (c) Appointment of other Working Committees.
   (d) Proposal of Amendments to the Constitution.
   (e) Proposal of Amendments to the By-Laws.
   Other Miscellaneous Business.
Adjournment.

Second Session, Wednesday, September 15th.

8:30 A. M.

1. Reading of the Minutes of the Previous Session.

2. Unfinished Business.
   (a) Amendments to Constitution and By-Laws.
3. Report of the Committee on the Study and Prevention of Tuberculosis.
   H. J. HARTZ, Detroit, Chairman.
4. Report of Committee to Encourage the Systematic Examination of the Eyes and Ears of School Children Throughout the State.
   WALTER R. PARKER, Detroit, Chairman.
5. Miscellaneous Business.

Adjournment to General Meeting.

Third Session, Thursday, September 16th.

8 A. M.

1. Reading of the Minutes of the Previous Session.
2. Report of Committee on Nominations.
3. Unfinished Business.
4. Report of Committee on Venereal Prophylaxis.
   A. P. BIDDLE, Detroit, Chairman.
5. Miscellaneous Business.

Adjournment to Section Meetings.

GENERAL MEETING.

CONGREGATIONAL CHURCH.

President—A. I. LAWBAUGH, Calumet.
State Secretary—B. R. SCHENCK, Detroit.

First Day, Wednesday, September 15th.

10 A. M.

1. Call to Order.
2. Prayer.
   REV. DR. GELSTON.
3. Address of Welcome.
   HON. FRANK H. MILHAM,
   Mayor of Kalamazoo.
4. Address of Welcome on Behalf of the Medical Profession.
   DR. A. I. NOBLE, Superintendent of the Michigan Asylum.
5. Report from the House of Delegates.
   B. R. SCHENCK, Detroit, State Secretary.
6. Address of the President.
   A. I. LAWBAUGH, Calumet.
   Subject—"The Physician, His Duties and Relations to the Profession and the Public."
7. Miscellaneous Business. Under this head there will be a general discussion of questions on medical economics. This opportunity is given to any member who wishes to bring before the entire society, any subject of general interest, either by informal discussion, or by formal resolutions.
8. Nominations for President, 1909-1910.
9. Adjournment.

Wednesday Evening, September 15th.

8:15 P. M.

CONGREGATIONAL CHURCH.

Address by the Guest of Honor,
DR. ARCHIBALD CHURCH, Professor of Nervous and Mental Diseases, Northwestern University, Chicago.

Subject, "Mind Cures in General and the Emmanuel Movement in Particular."

After the address the visiting members will be entertained by the Kalamazoo Academy at the Elks' Temple.

Second Day, Thursday, September 16th.

11:30 A. M.

1. Unfinished Business.
2. Report from the House of Delegates.
   B. R. SCHENCK, Detroit, Secretary.
3. Miscellaneous Business. Another opportuntunity to bring to the attention of the general body any questions of general interest.
4. Announcement by the Committee on Nominations on the Result of the Ballot for President.
5. Introduction of President-elect.

Adjournment sine die.

PROGRAM OF THE SECTIONS.

The following rules from Chapter III. of the

By-laws govern all papers, but may be modified in case of necessity by vote of the section in which the necessity arises.

SEC. 3. Except by special vote the order of exercises, papers and discussions as set forth in the official program shall be followed from day to day until it has been completed.

SEC. 4. No address or paper before the Society, except that of the President, shall occupy more than fifteen minutes in its delivery; and no member shall speak longer than five minutes, or more than once on any subject.—(*As amended May 25, 1906.*)

SEC. 5. All papers read before the Society shall be its property. Each paper read shall be deposited immediately with the Secretary, but the author may also publish the same in any reputable journal not published in this State, provided the printed article bears the statement that it was "read before the Michigan State Medical Society."

SECTION OF GENERAL MEDICINE.

CHAPEL, CONGREGATIONAL CHURCH.

Chairman—WILLIAM M. DONALD, Detroit.
Secretary—G. F. INCH, Kalamazoo.

On account of the length of the program, and in order to give every one an opportunity, the fifteen minute rule will be enforced.

The Secretary of the Section will collect all papers as soon as read.

Discussions are limited to five minutes.

First Session, Wednesday, September 15th.

1:45 P. M.

1. Sero-diagnosis of Syphilis and its Clinical Value.

HENRY ROCKWELL VARNEY, Detroit.

Theory, and technic of the Wasserman Reaction. Difficulties arising with the materials and the technic. Modifications of the original reaction and precipitation reactions. The great importance of this test in the diagnosis and treatment of syphilis.

Discussion opened by James F. Breakey, Ann Arbor, and Dean Loree, Ann Arbor.

2. Syphilis of the Liver;

ARTHUR R. EDWARDS, Chicago.

Consideration of the two usual types, gummatous and indurative, cirrhosis-like forms. Consideration of cases causing stomach symptoms, simulating liver abscess, gall stones, peritonitis and pylephlebitis.

Discussion opened by William F. Breakey, Ann Arbor, and Andrew P. Biddle, Detroit.

3. Aneurysm of the Descending Thoracic Aorta;

JOHANN FLINTERMAN, Detroit.

Difficulty of diagnosis of such cases. The frequency of occurrence. The differential diagnosis between pulmonary neoplasm and aneurysm of the descending thoracic aorta. Relation between syphilis and eneurysm. A few remarks on pulmonary syphilis. Demonstration of the specimen of the aneurysm and the Roentgen picture of this case.

Discussion opened by W. J. DuBois, Grand Rapids, and John H. Kellogg, Battle Creek.

4. The Physician and the Anti-Tuberculosis Campaign;

A. S. WARTHIN, Ann Arbor.

This paper will treat of the changing attitude of laymen toward medicine, of the popular demand for preventive medicine, and of the increased knowledge of the laymen concerning matters once supposed to be the property of the physician. As a result of this change, the profession of medicine is also undergoing an evolution from a science and an art professing to cure, to a science of prevention of disease. The physician of the present day, must meet this changed attitude. His duties become no longer those relating to his immediate patients, but he must concern himself with the broader questions of public health and the fight against preventable diseases. In modern Health Board work, in school inspection, in anti-tuberculosis work, in the fight against venereal diseases, he finds a legitimate field for activity. The increasing medical knowledge among the people at large demands that the physician lead these movements in the prevention and extermination of diseases. There is a growing tendency for the people to consult physicians as to the state of their health and what things should be avoided or prevented. The physician must meet this new conception of medical practice or fall behind. In the fight again tuberculosis he must especially take a leading and important part. The paper gives further a detailed description of the relations of the physician to the Local and State tuberculosis associations.

Discussion opened by J. B. Jackson, M. D., Kalamazoo, and Fred R. Belknap, Benton Harbor.

5. Further Studies on the Diagnostic Value of the Hemolytic Tests in Cancer and Tuberculosis;

FRANK SMITHIES, Ann Arbor.

It has been shown that in blood serum of patients affected with cancer there exists a property causing destruction of red cells of humans—especially healthy humans. It has been suggested that this reaction be used for clinical diagnosis of new growths.

In tuberculous patients' blood serum, some observers have noted that the hemolytic property with respect to healthy individuals will cause destruction of red blood cells from tuberculous patients.

The paper considers the development of the hemolytic reactions in detail, and reports the author's results in more than one hundred and fifty cases of cancer, tuberculosis and other disease conditions.

Discussion opened by Victor C. Vaughan, Ann Arbor, and Alden Williams, Grand Rapids.

6. Landmarks in the Diagnosis of Incipient Consumption;

ELMER F. OTIS, Battle Creek.

1. Signs and Symptoms that are not positively diagnostic. 2. The Uncertain and Unreliable factors that are

often given undue prominence. 3. The few (and positive) findings that must decide the real diagnosis. Conclusions.

Discussion opened by T. M. Koon, M. D., Grand Rapids, and Victor C. Vaughan, Jr., Detroit.

Second Session, Thursday, September 16th.

9 TO 11:30 A. M.

1. Vincent's Angina;

M. L. HOLM, Lansing.

After a brief general historical consideration, the prevalence, etiology, bacteriology, pathology, symptomology, diagnosis, contagion, prognosis and treatment are separately considered. The information is largely collected from about two hundred and fifty cases of suspected diphtheria examined during the past year, in which the fusiform bacilli occurred about sixty times. These sixty cases are tabulated and condensed, briefly giving age, sex, day of disease, location and color of membrane, temperature, clinical diagnosis and cultural results for publication, will be only generally considered in the paper as read.

Another series of about thirty cases, which had been clinically diagnosed as diphtheria and found by bacteriological examination not to be diphtheria, has been similarly tabulated, showing both swab and cultural findings which indicate that "bacillus fusiformis" is the most frequent cause of pseudo-diphtheria. Drawings showing the organism from cases of "Vincent's Angina" have been prepared and will be presented.

Discussion opened by T. B. Cooley, Detroit, and Blanch Epler, Kalamazoo.

2. The Clinical Importance of Blood Pressure Observations;

B. A. SHEPARD, Plainwell.

Physiology of blood pressure; conversion of intermittent stream into steady stream; elements producing pressure, heart, arteries, peripheral resistance or friction.

Elements regulating normal pressure; tissue supply, secretions and excretions, rest, psychic phenomena, exercise, age, menstruation, pregnancy, labor, viscosity of blood. Reports of experiments. Normal limits and variations.

Pathological processes affecting tension, arterial disease (a) local, (b) general, kidney alterations (a) acute, (b) chronic, nervous and mental diseases, narcotics; surgical conditions: anaesthesias, operative proceedures in abdomen, pelvis, thorax and head; hemorrhage collapse, shock obstetrical complications.

Principle of measurement of pressure; comparison of methods and apparatus.

Therapeutics, medicinal and hygienic.

Discussion opened by Richard E. Mercer, Detroit, and C. B. Fulkerson, Kalamazoo.

3. Paroxysmal Tachycardia;

HERBERT M. RICH, Detroit.

1. Importance of the Recognition of these cases. Definition. 2. Classification of Cardiac Irregularities. 3. The Nodal Rhythm. 4. Cardiac Sclerosis. 5. Case Reports. 6. Diagnosis. 7. Prognosis. 8. Treatment.

Discussion opened by Charles W. Hitchcock, Detroit, and Walter D. Ford, Detroit.

4. Prognosis in Cardiac Insufficiencies;

HUGO A. FREUND, Detroit.

Profession should recognize that great responsibility rests in giving an accurate prognosis in any cardiac affection. Imperfect knowledge of the physiology of the heart, of its power of recuperation, and of its pathology often lead to grave errors in prognosis and unjustly influence the lives of many individuals.

Different forms of cardiac incompetency will be discussed (1) in relation to the conditions in the heart itself; (2) in relation to other organs of the body; (3) in relation to the habits and previous history of the individual.

Certain definite principles for basing a prognosis in all heart affections will be considered, founded mainly upon the limits and power of cardiac response.

Discussion opened by George McKean, Detroit, and A. W. Ives, Detroit.

5. Value of the Orthodiagraph;

JAMES VAN ZWALUWENBURG, Ann Arbor.

Uncertainty of the results of Percussion. Distortion of the Roentgenogram. Principle of the Orthodiagraph. Technique. Forms of heart shadow. Analysis of the left border. Mensuration. Influence of stature, weight, etc. Effect of moderate and strenuous exercise. The heart in paroxysmal tachycardia. The heart in valvular disease. Its value in teaching.

Discussion opened by D. M. Cowie, Ann Arbor, and H. H. Cook, Detroit.

Third Session, Thursday, September 16th.

1:45 P. M.

Election of Chairman for one year and Secretary for two years.

1. Present Status of Stomach Lavage;

CHARLES D. AARON, Detroit.

Indiscriminate Use. Limitations. Value in Intoxications. Contraindications. Safe method. Autolavage.

Discussion opened by David Levy, Kalamazoo, and E. L. Eggleston, Battle Creek.

2.—The Value of Pathological Examinations in the Diagnosis of Malignancy and Analysis of Reports;

CARL S. OAKMAN, Detroit, and
THADDEUS WALKER, Detroit.

Characteristics of malignant growths. Classification. Probability of confusing malignant with benign growths, inflammatory conditions, granulomata, tuberculosis. Significance of differentiating the varieties of carcinoma, sarcoma and endothelioma. Effect of accurate diagnosis on prognosis and treatment. Result of systematic pathologic examination in improving medical diagnosis. Tabulation of diagnoses of malignancy in over 2400 pathologic sections.

3. Transitory Insanity;

CHARLES W. HITCHCOCK, Detroit.

Consideration of its essence, its possible medico-legal relations, the principles which are often sought to be applied and of those which should obtain. Illustration.

Discussion opened by E. A. Christian, Pontiac, and David Inglis, Detroit.

4. Why Should Enlarged Tonsils and Adenoids be Removed, When and How;
COLLINS H. JOHNSON, Grand Rapids.

Discussion opened by R. Bishop Canfield, Ann Arbor, and E. J. Bernstein, Kalamazoo.

5. Treatment of Gastric Ulcer;
JOHN T. WATKINS, Detroit.

The non-operative treatment of gastric ulcer depends, for the greater part, upon the dietetic management of the case in question. The ideas set forth by Lenhartz have proven very useful in the hands of the author. Enforced rest also plays a very prominent part. Environment must be considered. Medicinally, little is required except for special symptoms and occasionally, for the regulation of the bowels.

Discussion opened by A. W. Crane, Kalamazoo, and James E. Davis, Detroit.

6. Education in the Prevention of Venereal Diseases;
R.McD HARKIN, Marquette.

SECTION ON SURGERY, OPHTHALMOLOGY AND OTOLOGY.

AUDITORIUM, Y. M. C. A.

Chairman—L. J. HIRSCHMAN, Detroit.
Secretary—R. E. BALCH, Kalamazoo.

On account of the length of the program, and in order to give every one an opportunity, the fifteen-minute rule will be enforced. Discussions are limited to five minutes.

The Secretary of the Section will collect all papers as soon as read.

First Session, Wednesday September 15th.

1:45 P. M.

Chairman's Address; L. J. Hirschman, Detroit.

1. Suprapubic Prostatectomy;
ANGUS MCLEAN, Detroit.

In suitable cases the shock is less than in the perineal operation. It allows the operator to make a thorough inspection of the bladder. There is also better urinary control following this method.

2. Senile Hypertrophy of the Prostate;
DEAN LOREE, Ann Arbor.

Report of a year's work at the University Hospital. A short history of the operation. Pathology, especially of those glands showing carcinomatous change. Advisibility of early operation. Post-operative complications.

3. Diagnosis and Treatment of Prostatis and Seminal Vesiculitis;
M. A. FECHHEIMER, Detroit.

Diagnosis and symptomatology. Method of rectal examination. Examination of the secretions of the prostate and seminal vesicles, stained and unstained. Distinction between an aseptic prostatitis and a mixed infection. Bacteria found. Prognosis. Treatment. When may a patient be allowed to marry.

Discussion of the preceding papers opened by F. W. Robbins, Detroit.

4. Danger in "Interval" Appendectomies;
W. H. HAUGHEY, Battle Creek.

Two beautiful young ladies, less than twenty years of age, had appendicitis; both made good recoveries; both had interval operations; both died. Why?

Discussion opened by James E. Davis, Detroit.

5. Surgery of the Pylorus;
J. A. MACMILLAN, Detroit.

6. Foreign Bodies in the Air Passages and Esophagus;
PRESTON M. HICKEY, Detroit.

Introduction. The use of the Jackson Tube. The aid of the Roentgen ray in diagnosis. The superiority of the Jackson tube over other means of examination. Summary of the technique employed. Report of cases, including safety-pin in bronchus, tooth in bronchus, coins in esophagus, etc.

Second Session, Thursday, September 16th.

9 TO 11:30 A. M.

1. Some Experiments in Intestinal Anastomosis;
CONRAD GEORG, Ann Arbor.

Brief historical review of the older methods. The original Lembert suture not primarily a sero-muscular stitch as described in all modern text books. Quotation from one of Lembert's original papers in proof of this. The difficulty of performing an aseptic operation on the intestine is described. Experiments carried out upon dogs to demonstrate the methods of F. B. Walker, Parker and Kerr, and Moszkowicz. Conclusions.

2. Sub-phrenic Abscess;
F. B. WALKER, Detorit.

Location; source; symptoms; course and treatment. History of a case discharging spontaneously and termination in recovery.

3. The Urgent Need of Operation in All Cases of Hernia;
E. B. SMITH, Detroit.

I. Local pathological manifestations at the seat of the hernia. (a) Cosmetic considerations. (b) Gradual increase as to size and severity of the symptoms. (c) Complications. (1) Local inflammation, pain and swelling. (2) Adhesions. (3) Strangulation.

II. Systemic pathological manifestations. (a) General inflammation of both small and large intestine causing constipation. (b) Injurious effect on the entire alimentary tract. (c) Gastritis and finally ptosis of the stomach. (d) Effects upon liver and gall bladder. (e) Effect upon

urinary tract. (f) Displacements of abdominal organs. (g) Severe irritation to the nervous system.

III. Previous preparation for operation.

IV. Statistics of mortality of a mere herniotomy as compared with an operation when strangulation is present.

4. Urinary Infections; Treatment by Inoculations;

W. T. DODGE, Big Rapids.

Infections in any part of the body are attended by elimination of the infecting organism in the urine, even though the urinary passages are not diseased. In chronic cases, the kidneys are certain to become irritated and in time inflamed by the passage of the micro-organisms.

B. coli communis and B. pyocyaneus have been found by us more frequently than other germs. Old cases of bladder and kidney infection recover rapidly under inoculation with homologous vaccines. Cases presenting no signs of kidney or bladder disease, the urine containing no pus and no casts, but infected with the colon bacillus, and presenting symptoms of heart disease, and other affections have improved rapidly under vaccine therapy.

Discussion opened by A. W. Crane, Kalamazoo.

5. Acute Post-operative Dilatation of the Stomach;

ALEXANDER W. BLAIN, Detroit.

Comparative rarity of reported cases. Embryology and physiology of gastro-intestinal tract. Dilatation of the stomach in animals. Experimental work on dogs. Etiology; pathology and diagnosis. Report of cases. Treatment.

Third Session, Thursday, September 16th.

1:45 P. M.

Election of Chairman for one year and Secretary for two years.

1. Mixed Toxins in the Treatment of Sarcoma, with the Report of a Successful Case;

F. W. ROBBINS, Detroit.

After a short statement of Coley's position regarding his method of treatment of sarcoma and the results, the history of a case before and after operation is given, with pathological report and exhibition of the microscopical slides.

2. A Case of Sarcoma of the Ulna;

H. E. RANDALL, Flint.

General consideration of tumors of the long bones. Conservative treatment of some of the varieties classified as malignant. Report of a periosteal, spindle and round cell sarcoma of the ulna in which the entire ulna was removed with no recurrence.

Technic of removal of the ulna and the functional results. Huntington's bone transference opens up a method of operating in certain selected cases, if the diagnosis is made early.

3. Final Results of Thyroidectomy for Exophthalmic Goitre;

MAX BALLIN and J. W. VAUGHAN, Detroit.

Classification of cases into (a) primary exophthalmic goitre and (b) secondary exophthalmic goitre.

Mortality percentage. Improvement of different symptoms following operation: (1) heart, (2) nervous, such as tremor, etc., (3) eyes, (4) intestinal, (5) weight, (6) condition of blood.

4. Major Amputations;

RALPH H. SPENCER, Grand Rapids.

Personal experience with major amputations, with report of eleven cases. Four cases failed to survive the amputation, because of constitutional disturbances. The causes for this were: in one case, tuberculosis; in one, diabetes; in two, chronic nephritis.

Among the cases are three of double amputation of the lower extremity, one of which was fatal, due not to the amputation, but to chronic nephritis and alcohol poisoning.

5. Notes of Practical Interest in the Non-Surgical and Surgical Treatment of Crossed Eyes and Other Eye Muscle Troubles;

E. J. BERNSTEIN, Kalamazoo.

Relation between eye muscle troubles and general health. Causes. Detection, requiring great care in differentiation. Treatment mainly non-surgical. Crossed eyes, refractive, paralytic and purely muscular. Loss of function when not under proper care. Operation not indicated, as a rule, until 10th year. Tenotomies or advancement of muscles.

Discussion opened by Leartus Connor, Detroit.

SECTION ON GYNECOLOGY AND OBSTETRICS.

PARLORS, CONGREGATIONAL CHURCH.

Chairman—F. C. WARNSHUIS, Grand Rapids.
Secretary—C. G. PARNALL, Jackson.

On account of the length of the program and in order to give every one an opportunity, the fifteen minute rule will be enforced.

The Secretary of the Section will collect all papers as soon as read.

First Session, Wednesday, September 15th.

1:45 P. M.

1. Chairman's Address;

F. C. WARNSHUIS, Grand Rapids.

2. Injuries and Repair of the Pelvic Floor;

H. B. GARNER, Traverse City.

Necessity of accurate knowledge of the anatomy of the pelvic floor. Description of the levator ani muscle. Results of injury of the levator ani. Methods of repair.

3. Repair of Vesico-vaginal Fistulae Through an Incision in the Anterior Vaginal Wall;

WILLIAM F. METCALF, Detroit.

Extra-peritoneal incision through anterior bladder wall. Bladder wall separated from vagina about the fistulous

opening. Removal of cicatrix and repair of opening in vaginal mucosa by continuous catgut sutures. Repair of muscular layer of bladder by the same kind of sutures. Edges of bladder mucosa approximated with No. 0 catgut. After-treatment. Cases.

4. Uterine Fibroids;

R. R. SMITH, Grand Rapids.

Pathology. Illustrations of the growth of fibroids; illustrations of the degeneration of fibroids; external complications; report of cases; indications for operation; operation.

5. Sarcomatous Changes in Uterine Fibroids With a Report of Nine Cases;

F. C. WITTER, Ann Arbor.

Second Session, Thursday, September 16th.

9 TO 11:30 A. M.

1. A Plea for Better Attention to the New-born Baby by the Obstetrician;

I. L. POLZKER, Detroit.

Directions and teaching about the new-born baby to mother and nurse. Careful examination at birth and frequent examinations during first weeks of life. Prevention, early diagnosis and treatment of the diseases of the new born. Encourage the mother to nurse the baby.

2. Management of Placenta Previa;

E. T. ABRAMS, Dollar Bay.

3. Hydronephrosis and Pus-producing Infections of the Ureters and Kidneys Complicating Pregnancy;

CLARA M. DAVIS, Lansing.

1. Report of a case. 2. Consideration of the subject in general. (a) Influence of pregnancy on the course of existing disease. (b) Pregnancy as an etiological factor. (c) Diagnosis and the importance of routine microscopical examination of the urine. (d) Prognosis and treatment. (e) Text-book teachings and recent literature regarding these diseases in pregnancy.

4. The Practical Application of Physiotherpy in Gynecology and Obstetrics. A Resume of the Methods which Render Greatest Service in Medical and Surgical Gynecology;

J. H. KELLOGG, Battle Creek.

Hydriatic methods render great service in the treatment of both acute and chronic pelvic disorders. In inflammatory affections of the uterus and appendages, hot vaginal irrigation, cool rectal irrigation, fomentations, hot hip and leg packs combined with ice-packs over the affected region, heating leg compresses, hot pediluvia and general tonic applications such as the cold towel rub and mitten friction, render most excellent service.

In chronic pelvic disorders, the tonic sitz bath, sedative sitz bath, the revulsive sitz bath, hot and cold vaginal irrigation and general alterative and restorative applications, such as the vapor bath followed by the rubbing wet sheet or shower bath, are in the highest degree productive of recovery. The arc light, the electric light bath, the photophore, the thermaphore and other measures of applying light and heat are almost equally serviceable. Electricity, massage, manual Swedish movements, graduated medical gymnastics and proper dietetic management may also be made to render service in the treatment of both acute and chronic disorders of the pelvic viscera.

In surgical cases likewise, the measures named, and others applicable to the treatment of a bed patient, may be employed to most excellent advantage in lessening pain, thus obviating the use of narcotics; in peritonitis, wound suppurations, and other complications; and in hastening convalescence.

Adjournment to General Session at 11:30 A. M.

Third Session, Thursday, September 16th.

1:45 P. M.

Election of Chairman for one year and Secretary for two years.

1. The Internal Secretion of the Ovary; Its Application in the Treatment of Disturbances of Artificial and Physiologic Menopause;

W. H. MORLEY, Detroit.

Early use of animal extracts. The theory of internal secretions. Reciprocal action of the glands with an internal secretion. Experimental work on animals to show that ovarian extract is toxic to the male, and that the general metabolism is diminished after castration or especially that the removal of the ovaries causes a less excretion of phosphoric anhydride. Report of cases in which ovarian extract or extract of corpus luteum has been used. Results. Conclusions.

2. A Clinical and Pathological Study of over One Hundred Cases of Large New Growths of the Ovary Benign and Malignant, (30 minutes);

REUBEN PETERSON and N. N. WOOD, Ann Arbor.

The cases will be grouped according to their pathologic findings, and then the different groups will be studied as to the frequency with which these tumors occur, also as regards prognosis and the best modes of treatment. Especial emphasis will be laid upon the differential diagnosis of the tumors of the different groups. The pathologic findings will be carefully tabulated and conclusions drawn from these findings.

3. Hydatidiform Mole;

GEORGE KAMPERMAN, Ann Arbor.

Historical note. Report of a case of five months' development with rather marked symptoms of toxemia. Also symptoms simulating placenta previa. Treatment by curettage. Sapremia. Recovery.

Discussion of case with reference to etiology, symptoms, diagnosis, treatment, prognosis.

4. The Crime of Neglecting Cases of Uterine Cancer;

J. H. CARSTENS, Detroit.

Committee on Arrangements, Michigan State Medical Society.

Dr. A. H. Rockwell, Chairman

Dr. J. W. Bosman — Dr. P. T. Butler
Dr. H. O. Statler — Dr. F. Shillito
Dr. J. B. Jackson

Committee on Information and Accommodation.

Dr. J. W. Bosman — Dr. F. Shillito

Committee on Advertising.

Dr. H. O. Statler — Dr. A. H. Rockwell
Dr. P. T. Butler — Dr. J. B. Jackson

Committee on Entertainment (Wednesday Evening).

Dr. A. I. Noble — Dr. E. P. Wilbur
Dr. A. Hochstein — Dr. H. O. Statler
Dr. J. W. Bosman — Dr. A. S. Youngs

Committee on Reception at Hall (Y. M. C. A. and Church).

Dr. J. W. Bosman — Dr. F. M. Ilgenfritz
Dr. C. E. Boys — Dr. R. Y. Adams
Dr. R. E. Balch — Dr. C. B. Fulkerson
Dr. A. E. Balyeat — Dr. J. Fletcher
Dr. E. J. Bernstein — Dr. D. J. Levy
Dr. P. T. Butler — Dr. H. B. Osborne
Dr. A. B. Cornell — Dr. A. I. Noble
Dr. A. W. Crane — Dr. W. S. Thomkinson
Dr. O. H. Clark — Dr. F. H Tyler
Dr. W. den Bleyker — Dr. E. J. Welch
Dr. D. H. Eaton — Dr. E. P. Wilbur
Dr. F. Shillito — Dr. A. H. Rockwell
Dr. J. B. Jackson — Dr. W. A. Stone
Dr. D. J. Scholten — Dr. D. P. Pierce
Dr. W. H. Scott — Dr. B. Epler
Dr. L. H. Stewart — Dr. H. Ostrander
Dr. G. F. Inch — Dr. H. O. Statler
Dr. D. P. Osborne — Dr. E. Ames

Delegates to the Forty-fourth Annual Meeting.

Note.—The first name given is that of the delegate, the second that of the alternate.

Antrim—L. L. Willoughby, Mancelona.
R. E. L. Gibson, Central Lake.

Barry—

Bay—T. A. Baird, Bay City.
J. C. Grosjean, Bay City.

Benzie—H. J. Kinne, Frankfort.
G. O. Edmunds, Honor.

Berrien—C. E. W. Witt, St. Joseph.
Z. G. Walker, Benton Harbor.

Branch—W. A. Griffith, Coldwater.
A. G. Holbrook, Coldwater.

Calhoun—W. H. Riley, Battle Creek, and
W. C. Marsh, Albion.
M. A. Mortensen, Battle Creek, and
S. R. Eaton, Battle Creek.

Cass—

Chippewa—E. H. Webster, Sault Ste. Marie.
G. J. Dickinson, Sault Ste. Marie.

Clinton—A. O. Hart, Maple Rapids.
J. E. Taylor, Ovid.

Delta—O. C. Breitenbach, Escanaba.
G. W. Moll, Foster City.

Dickinson—

Eaton—P. H. Quick, Olivet.
C. A. Stimson, Eaton Rapids.

Emmet—L. W. Gardner, Harbor Springs.
J. J. Reycraft, Petoskey.

Genesee—H. R. Niles, Flint.
J. G. R. Manwaring, Flint.

Gogebic—J. R. Moore, Ironwood.
E. O. Houghton, Ironwood.

Grand Traverse—A. S. Rowley, Traverse City.
F. P. Lawton, Traverse City.

Gratiot—E. A. Bagley, Alma.
Stiles Kennedy, St. Louis.

Hillsdale—B. F. Green, Hillsdale.
D. W. Fenton, Reading.

Houghton—N. S. MacDonald, Hancock.
P. D. Bourland, Lake Linden.

Huron—J. D. Lackie, Grindstone City.
B. Friedlander, Sebewaing.

Ingham—R. E. Miller, Lansing.
C. M. Dunning, Lansing.

Ionia—C. S. Cope, Ionia.
J. E. Ferguson, Belding.

Isabella—James McEntee, Mt. Pleasant.
C. M. Baskerville, Mt. Pleasant.

Jackson—F. W. Rogers, Jackson.
Peter Hyndman, Jackson.

Kalamazoo—J. C. Maxwell, Paw Paw, and
A. W. Crane, Kalamazoo.
J. C. Shepherd, Plainwell, and
Herman Ostrander, Kalamazoo.

Kent—W. J. Du Bois, Grand Rapids, and
S. I. Rozema, Grand Rapids.
J. C. Kenning, Grand Rapids, and
J. D. Hastie, Grand Rapids.

Lapeer—S. A. Snow, North Branch.
G. W. Jones, Imlay City.

Lenawee—O. Whitney, Jasper.
I. T. Spaulding, Hudson.

Livingston—W. C. Huntington, Howell.
J. E. Browne, Howell.

Macomb—James Yates, Roseville.
Robert Greenshield, Romeo.

Manistee—Harlan McMullen, Manistee.
H. D. Robinson, Manistee.

Marquette—J. H. Andrus, Negaunee.
R. A. Burke, Ishpeming.

Mason—

Mecosta—L. S. Griswold, Big Rapids.
J. B. Campbell, Stanwood.

Menominee—

Midland—

Monroe—P. S. Root, Monroe.
C. T. Southworth, Monroe.

Montcalm—J. O. Nelson, Howard City.
W. H. Belknap, Greenville.

Muskegon—F. W. Garber, Muskegon.
J. D. Buskirk, Shelby.

Newaygo—Charles Long, Fremont.
G. W. Nafe, Fremont.

Oakland—E. A. Christian, Pontiac.
M. W. Gray, Pontiac.

O. M., C. O., R. O.—C. C. Curnalia, Roscommon.
W. G. Young, Gaylord.

Ontonagon—W. B. Hanna, Mass.
A. L. Swinton, Ontonagon

Osceola—A. Holm, Le Roy.
H. L. Foster, Reed City.

Ottawa—F. B. Smith, Coopersville.
J. A. Cousins, Douglas.

Presque Isle—V. W. Shirley, Onaway.
F. P. Nevins, Posen.

Saginaw—W. J. O'Reilly, Saginaw.
B. B. Rons, Saginaw.

Sanilac—J. A. Fraser, Lexington.
H. H. Learmont, Croswell.

Schoolcraft—C. M. Livingston, Manistique.
Andrew Nelson, Manistique.

Shiawassee—E. E. Ward, Owosso.
W. L. Parker, Corunna.

St. Clair—C. B. Stockwell, Port Huron.
W. B. James, Marysville.

St. Joseph—F. C. Kinsey, Three Rivers.
L. K. Slote, Constantine.

Tri—V. F. Huntley, Manton.

Tuscola—

Washtenaw—W. F. Breakey, Ann Arbor, and
Reuben Peterson, Ann Arbor.
J. A. Wesinger, Ann Arbor, and
C. G. Darling, Ann Arbor.

Wayne—	Delegate.	Alternate.
	A. P. Biddle,	Leartus Connor,
	C. W. Hitchcock,	R. Hislop,
	A. D. Holmes,	P. J. Livingston,
	F. W. Robbins,	G. E. McKean,
	B. R. Shurly,	M. V. Meddaugh,
	F. B. Tibbals,	R. E. Mercer,
	V. C. Vaughan, Jr.,	F. D. Summers,
	Wadsworth Warren.	F. B. Walker.

COMMERCIAL EXHIBIT, KALAMAZOO MEETING.

Space No. 1—Fairchild Brothers & Foster, New York.

Space No. 2—Globe Mfg. Co., Battle Creek, Mich.

Space No. 3—Horlick's Malted Milk, Racine, Wis.

Space No. 4—

Space No. 5—Mellin's Food Company, Boston.

Space No. 6, 7, 8—Truax, Greene & Company, Chicago.

Space No. 9—The Upjohn Company, Kalamazoo.

Space No. 10—Smith, Kline & French Company, Philadelphia (Eskay's Food).

Space No. 11—

Space No. 12—O. F. Schmid Chemical Company, Jackson, Mich. (Pharmaceuticals).

Space No. 13—

Space No. 14—

Space No. 15—The Charles H. Phillips Chemical Company, N. Y.

Space No. 16—D. Appleton & Company, New York, Chicago. (Subscription and Medical Books).

Hotels.

The Burdick, capacity 175, $2.50 to $4.50 American Plan.

The American, capacity 150, $2.00 to $3.50, American Plan.

The Rickman, capacity 125, $2.50 to $4.00, American Plan.

The Columbia, capacity 60, $2,00, with bath, American Plan.

The Berghoff, capacity 35, 50 cents to $1.00, European Plan.

Garages.

Russell, Hoague & Albrecht, 425 E. Main St.

Buick Garage, 308-312 E. Water St.

Dallas Boudeman, 310 N. Burdick St.

Burdick Garage, 118 W. Water St.

George Boyles, 107 N. Church St.

C. H. Bemenderfer, 115 Eleanor St.

Ralph Motter, 718 S. Burdick St.

Storage rates will be 50 cents a day; washing and polishing, 50 cents to $2.00, according to the amount of work.

Genius and the Last Born.

Contrary to the generally accepted dictum that geniuses have been the first born of their parents, the *Medical Times* gives the following:

"Coleridge, the last of thirteen children; Cooper the eleventh of twelve; Washington Irving the last of eleven; Balzac the last of three; George Eliot the last of four; Napoleon the eighth and probably the last of his family; Daniel Webster the last of seven; Franklin the last of seventeen and the last born of the last born of several generations; Rembrandt the last of six; Rubens of seven; Landseer was the fifth of seven; Von Weber the ninth; Wagner the last of seven, as also Mozart; Schumann the last of five and Schubert the thirteenth of fourteen.

Pregnancy and Phthisis.

Neitner has collected, in a Strassburg thesis, 27 severe and 34 milder cases of tuberculous pulmonary phthisis detected in a series of 5,720 pregnant women. In 41, or 67 per cent., of the cases, the lung symptoms grew worse during pregnancy. In every case where the larynx was involved the patient's condition became aggravated in the puerperium. In 18 cases pregnancy was interrupted by an obstetric operation; in 3 by Cesarean section, for pelvic contraction in 2, and for cancer of the cervix in the third; in 8 by induced abortion, and in 7 by induction of premature labor. In 16 abortion or premature labor occurred simultaneously.—*Z. f. gyn.*

The Calmette Reaction—Take Your Choice.

We are convinced that the ophthalmic reaction as directed to be practiced by Calmette and others it is of undoubted service in the diagnosis of tuberculosis. In no case where its worth could be tested clinically by the finding of the tubercle bacilli did we fail to obtain decided ocular manifestations following the instillation of the tuberculin. This reaction did not follow when instillations were made in the case of one hundred and twenty-six individuals affected with diseases other than tuberculosis. It was not obtained in seventy-four apparently normal adults.—*Physician and Surgeon.*

Although present indications seem to declare the inutility of the ocular reaction in tuberculosis it is certainly all too soon to forsake it for some new and equally unknown fetich which might lead us even farther into the marsh land than does this uncertain light which we are now watching so intently.—*New York State Journal of Medicine.*

Owing to their studious habits and their lack of proper physical exercise, Chinese students both in this country and in their native land are especially liable to tuberculosis.

The chief causative factors in peripleuritic abscesses are actinomycosis and typhoid osteomyelitis. A careful history as to a previous typhoid and a thorough microscopic examination of the pus should be secured.—*Am. Jour. Surg.*

Progress of Medical Science

SURGERY.

Conducted by

C. S. OAKMAN, M. D.

The Treatment of Tetanus has received considerable attention in the literature this summer. Among important articles are those of HESSERT in *Merck's Archives* and of Hutchings in *Surgery, Gynecology and Obstetrics.*

HESSERT puts down the period of incubation arbitrarily as under ten days in the acute cases, and over ten days in the sub-acute and chronic forms. The reason that treatment is so unsatisfactory is because the diagnosis cannot be made until after the toxin is intimately bound up with the nerve cells. Hence the best treatment is the prophylactic use of the antitoxin.

The indications in cases of developed tetanus are: (1) Remove the source of further toxin supply by proper local wound treatment. (2) Neutralize the toxin which may be contained in the tissue juices by massive injections of antitoxin subcutaneously. (3) Employ some remedy to allay the reflex excitability of the spinal cord; e. g. the subarachnoid injections of magnesium sulphate. (4) Nourish and support the patient. Antitoxin in spite of its great experimental efficiency in animals, and its undisputed value as a prophylactic has so far proved extremely disappointing as a curative agent, when the disease is fully developed. The reason can be readily appreciated when it is borne in mind that antitetanic serum, no matter how administered, can neutralize only that portion of toxin free and uncombined in the blood and lymph. It is immaterial how it is given, it circulates in the blood, neutralizes the toxin there and the surplus is excreted. None of it reaches the nerve cell where the toxin is locked up and therefore, if there is already a fatal dose of toxin in the nervous system when the case is first seen, no treatment will be of any avail. Statistics have shown: (1) That the mortality of tetanus has not been lowered by serum treatment and (2) that no special form of injection has any advantages over the subcutaneous, some methods being futile and sometimes positively dangerous.—*Merck's Archives.*

The Treatment of Tetanus by Chloretone.—HUTCHINGS, of Detroit, has apparently made a most valuable contribution to a most important, practical subject. His paper read at the meeting of the American Surgical Association, in June, gives the details of six cases of developed tetanus treated with chloretone.

The indications in treatment are: (1) Remove the source of toxin supply, either by local disinfection or by amputation. (2) Neutralize the toxin present in the circulation, i. e., that portion not yet combined with the cells of the nervous system. This can be accomplished by the injection of sufficient quantities of antitetanic serum. This is all the serum will do. It does not affect the nerve cell combination nor inhibit the growth of the organism. (3) Patient must be kept alive until the body can overcome the effects of the toxin. Death results from one of two causes, either, (a) the amount of the toxin is so great that it directly affects a weak heart or the vital centers in the medulla, causing death within a few hours, or (b) death results from exhaustion following prolonged and severe muscular contractions. In the former class, practically all will die. Treatment is more hopeful in the latter class.

It is the object then of the treatment to control muscular activity, for the intense muscular contractions may prove fatal either directly or indirectly—directly, by asphyxia, or indirectly, by the production of overwhelming amounts of katabolic products. Moreover, it is frequently impossible to give sufficient nourishment.

Numerous drugs have been used to control muscular contraction. With McClintock, the author made a comparative study of these agents and came to the conclusion that chloretone is the best substance for this purpose.

Hutchings has had six patients who were thus treated, one mild case, one moderate, three severe and one fulminating. Of these five recovered and one, the case of the fulminating type, died. The details of the treatment should be read tc be appreciated. The essentially new point is that chloretone is given in 30 to 60 grain doses, dissolved in whiskey, if given by the mouth or warm olive oil if given by the rectum. Elimination is hastened through the administration of copious saline enemata and by keeping the bowels open. The local wound is given careful attention and the serum administered to neutralize the circulating toxin, which has not yet combined with the nervous system.

The chloretone should be given in sufficient doses to control the convulsions.—*Surgery Gynecology and Obstetrics,* July, 1909.

GYNECOLOGY AND OBSTETRICS.

Conducted by

B. R. SCHENCK, M. D.

The Utility of the Vaginal Douche.—BYRON ROBINSON discusses at considerable length the results to be obtained from and the method of employing the vaginal douche. He describes the blood supply to the pelvic organs and states that the reason douches are of benefit is because the heat dilates the blood vessels and an increase in the amount of blood to a part means the healing of disease, according to the axiom that "living, flowing blood cures disease."

The explicit directions for use are as follows:

A. The fountain syringe *reservoir* for the vaginal douche should be of 12-quart capacity. The simplest and most economical vaginal syringe is a 12-quart wooden pail.

B. The *location* of the syringe should be four feet above the patient.

C. The *quantity* of fluid administered in the beginning should be 2 quarts for patients unaccustomed to its use, and 4 quarts for those accustomed to its use. The quantity should be increased a pint at each administration to 12 quarts.

D. The *temperature* of the douche should be 105° in the beginning and increased one degree at each administration until it is as hot as it can be borne (115 to 120°).

E. The *duration* of the douche should be 10 minutes for each gallon.

F. The *time* to administer the douche is in the evening immediately before retiring and in the morning (after which the patient should lie horizontally for 45 minutes).

G. The *position* of the patient should be on the dorsum.

H. As to the *method* of administering the douche the patient should lie on a sufficiently inclined plane to allow the returning fluid to drain into a vessel (pail, pan). The ironing board, washtub, or board resting on the bath tub conveniently serves the purpose. The douche should not be administered in the bed (unless ordered) nor in the standing or sitting posture or on the toilet seat.

I. As to *ingredients* a handful of sodium chloride (NaCl) and a half teaspoonful of alum should be added to each gallon, the sodium chloride to dissolve the mucus and pus, to act as a natural antiseptic and to prevent reaction. The alum is to astringe, check waste secretions and indurate tissue.

J. The *vaginal tube* employed in administering the douche should be sterilized, boiled, and every patient should possess one. The most useful vaginal tube is the largest that can be introduced or the one that distends the vaginal fornices the greatest, so that the hot fluids will bathe the widest surface area of the proximal or upper end of the vagina—the most adjacent to the uterine vessels (arteries, veins, lymphatics).

K. The *utility* of the vaginal douche is: (a) it stimulates contraction of tissue (muscle, elastic and connective); (b) it stimulates the contraction of vessels (lymphatics, veins and arteries); (c) it absorbs exudates; (d) it checks secretion; (e) it is a stimulant; (f) it relieves pain; (g) it cleanses; (h) it checks hemorrhage; (i) it curtails inflammation; (j) it drains the tractus genitalis. The usefulness of the vaginal douch depends on the quantity of fluid, the degree of temperature, its composition, the position of the patient during administration, and on systematic methods of employment.

L. *Disinfectants* in a vaginal douche are secondary in value to solvents of mucus, pus, leucocytes (sodium chloride).

M. The *objects* to be accomplished by a douche are: (a) The dissolving of the elements in the discharge, as mucus, pus and leucocytes; (b) the mechanical removal of the morbid secretions, accumulations, and foreign bodies; (c) antisepsis; (d) diagnosis.

N. The *requirements* of a douche: (a) it should be non-irritating; (b) it should be a transparent solution; (c) it should possess solvent powers of pus, and especially mucus; (d) it should be continued for months; (e) it should be omitted for three days during menstruation.

O. A vaginal douche given according to the above directions, will prove to be of therapeutic value, in the treatment of pelvic disease, a prophylactic agent, and a comfort to the patient.

P. The vaginal douche is contraindicated in subjects with oviductal gestation or acute pyosalpinx (as it is liable to induce rupture of the oviductal wall), abortion or leakage of pus through the abdominal oviductal sphincter.—American J. Surg., July, 1909.

PATHOLOGY AND BACTERIOLOGY.

Conducted by

C. E. SIMPSON, M. D.

The Transmission of Infectious Diseases.—The health officer of the port of New York, Dr. A. H. Doty, presents arguments opposing the belief that infectious diseases are commonly transmitted by clothing, baggage, rags, money, etc. He calls attention to the change of opinion that has taken place in regard to certain definite diseases. For example yellow fever was until quite recently believed to be transmitted by fomites; we now know it is borne by mosquitoes only. The same change of opinion has taken place in regard to bubonic plague. Fleas which infest rats are now considered responsible for its communication rather than clothing and rags.

The author believes that smallpox, typhus fever, measles and scarlet fever are seldom if at all conveyed through the medium of clothing, especially that of a well person. That clothing which has been laid away for years may act as a medium of infection when exposed or that a disinfected room may, months later, give rise to infection, he considers quite improbable. The instances in which such has seemed to be the case would, if carefully investigated prove to be due to direct contact.

The possibility that rags used for commercial purposes transmit disease is a favorite theory and has received long and careful attention at the hands of Dr. Doty. Besides his researches in this country he investigated the subject in Egypt. Here the rags, consisting principally of the worn-out garments of the natives, which garments are worn next to the skin, would seem to afford very favorable opportunity for the spread of any infectious disease. Still the statistics of the sanitary authorities showed not the slightest evidence that the men, women and children who were constantly in contact with these rags in the sorting room were more prone to infectious diseases than those following other pursuits.

Paper money is often regarded a common means of infection. In the Treasury Department at Washington where the clerks are constantly handling enormous quantities of old and filthy money there is no proof that this article is a medium of infection. The clerks contract infectious diseases no more frequently than do other people. After a careful bacteriological investigation, Mr. Hilditch of the Sheffield Laboratory of Bacteriology and Hygiene concludes: "From the observations that I have made it would seem that the bacteria present on paper money are non-virulent, and that the forms most present are the air forms. One conclusion that may be drawn after a careful study of this subject is that money constitutes an unimportant factor in the transmission of disease."

With regard to the cargoes of vessels the custom of the New York Quarantine Station is not to disturb them even when infectious diseases are found on board. Not the slightest evidence has been presented to show that this policy has in any way contributed to the extension of such diseases.

Though clothing and rags have been regarded so long as the means for the dissemination of disease, the real danger from the discharges of the respiratory and alimentary tracts has too frequently been overlooked. Our attempts at disinfecting these discharges are often quite useless. Disinfecting solutions affect only the superficial parts and powders are not effective. Boiling or burning all discharges is the only sure method of destroying all germs.

The fomites theory should not be considered as accounting for the ordinary spread of disease but as explaining unusual cases. No one who has had long experience with infectious diseases can doubt that almost any article can under some circumstances transmit disease, but the application of this possibility to all instances leads to a failure to discover the true cause in most cases. Infectious diseases are usually transmitted directly from the sick to the well. Recognition must at the same time be given to those carriers of disease who harbor within their bodies pathogenic germs, such as those of cholera, diphtheria, and typhoid, without themselves showing any symptoms of the disease. Mild, ambulant or unrecognized cases constitute one of the most common dangerous factors with which we have to deal.

Contact of the sick or their discharges with the well, the recognition of insect borne diseases and of apparently well disease carriers leaves very little to be accounted for by the fomites theory.—*The American Journal of the Medical Sciences,* cxxxviii, 30.

NEUROLOGY.

Conducted by

C. W. HITCHCOCK, M. D.

The President's Address at the American Neurological Association.—That Nestor of American Neurology, Dr. S. Weir Mitchell, although eighty years of age, has given new proof of his still virile mind, in his recent address as President, to the association composed of many of America's best neurologists. He mildly chides them upon the rarity in their proceedings of matters of therapeutic interest, admitting that this is the triumphant hour of diagnosis, which after all is the parent of therapeutics. He deplores the stand-still to which he thinks we have come in the treatment of insanity and bewails the elusive changes in mental maladies which even yet escape the ken of the pathologist.

He then suggests numerous problems worthy of careful study. For the physiology and pathology of the negro he asks as careful study as has been given his anatomy. Just why he is so comparatively immune to chorea, and why, in spite of his comparatively frequent luetic infection, he is so seldom the subject of tabes, it would be interesting to know. The physiology, too, of individuals who have lost large parts of the body by multiple amputation offers an interesting field for careful research.

But still more important is our frankly confessed ignorance concerning the nature of the excitatory impulse. He regards it as unfortunate that some of the masters of physics have not studied in both animal and plant transmissions of energy, in comparison with the exterior forms of physical energy, with which they are more familiar.

He cites the existence in the higher animals of ganglionic store-houses of potential energy which may become kinetic, through nerve tracts and muscles. The rate of transmission of nerve energy is quicker, the finer the organization; its centrifugal rate in the higher vertebrates being about 100 feet per second and its centripetal rate being about 150 feet per second. He suggests the probability of an altered rate in disease, a subject practically unexplored. "Is the speed slower in some asthenias?" he asks.

As to out-going energy, he distrusts the long accepted conclusion that the nerves themselves do not exhibit fatigue, by any failure to respond to any electric excitation as does not impair their integrity, but he adds, "we are far from knowing whether the normal energy of the will may not so exhaust them." In any asthenia we should be able to diagnose the weakness as muscular, neural, or ganglionic.

Our laboratories as yet fail to find proof of chemical changes accompanying the transmission of neural energy along nerves, nor can they detect during the most violent functional excitation of a nerve any rise in temperature. What is the nature of the molecular disturbance we call nerve energy? Nerves do not, like wires, leak energy and it is not known that a nerve in action affects by induction a nerve beside it.

This suggestive author asks whether the transmission of impulses and excitation is only a mode of physical energy or whether it be by chemical interchanges which are the parent cause of the electric phenomena. Our present views are so tentative as to lack the helpfulness for which we might hope if the nerve impulse could be proven to depend on minute and essential saline interchanges.

Dr. Mitchell is of the opinion that new studies should be inaugurated of that form of excito-contactile impulses which is found in plants and which he thinks probably identical with that observed in animals. The likeness of the two is striking, and though it has been more or less investigated in the vegetable kingdom, chemical explanation seems to have been but little considered.

The sensitive mimosa with its quick responses, is startingly suggestive. Forms of energy in plant life are more open to observation than their animal analogue and "whether here too in the animal, as the muscle shortens, there be any hydraulic interchange, is perhaps worth a thought."

Dr. Mitchell leaves untouched the assertion by Bose that all plants have nerves. Leaving an imperfectly summarized subject, he throws out some suggestions as to problems of the reflexes, their reinforcement, and how these latter act, since we are as yet ignorant of the tracts by which motor and sensory reinforcements reach the spinal centers.—*Jour. of Nerv. and Mental Dis.*, July, 1909.